MOTT MACDONALD

Environmental Team Services for Tuen Mun Area 54 Sewage Pumping Station

First Operation Phase Odour Impact Monitoring Report

January 2020

This First Operation Phase Odour Impact Monitoring Report for Tuen Mun Area 54 Sewage Pumping Station has been reviewed, certified by the Environmental Team Leader (ETL) and verified by the Independent Environmental Checker (IEC).

Certified by:

Ir Thomas CHAN
Environmental Team Leader (ETL)
Mott MacDonald Hong Kong Limited

Date: 3 February 2020

Verified by:

Wai Kwan CHIU
Independent Environmental Checker (IEC)
Meinhardt Infrastructure and Environment Limited

Date: 3/2/2020

Mott MacDonald
3/F International Trade Tower
348 Kwun Tong Road
Kwun Tong
Kowloon
Hong Kong

T +852 2828 5757
mottmac.hk

Drainage Services Department

Environmental Team Services for Tuen Mun Area 54 Sewage Pumping Station

First Operation Phase Odour Impact Monitoring Report

January 2020

Mott MacDonald Hong Kong Limited
registered in Hong Kong no. 236497

Contents

Executive Summary 1

1 Introduction 2
1.1 Background 2
1.2 Project Organisation 2
1.3 Purpose of the Report 2
1.4 Structure of the Report 2

2 Impact Odour Monitoring Requirements and Methodology 3
2.1 Introduction 3
2.2 Monitoring Requirements 3
2.3 Monitoring Locations 3
2.4 Monitoring Equipment 4
2.5 Monitoring Methodology 4
2.6 Monitoring Schedule 4

3 Impact Monitoring Results and Analysis 5
3.1 Monitoring Results 5
3.2 Monitoring Results Analysis 5

4 Summary of Complaints 8
4.1 Summary of Complaints 8

5 Conclusions and Recommendations 9
5.1 Conclusion and Recommendations 9

Appendices 15

A. Project Organisation 16

B. Method Statement of Odour Impact Monitoring 17

C. Event and Action Plan for Air Quality (Odour) 18

D. Technical Reports for 1st Impact Odour Monitoring 19

Executive Summary

In November 2018, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by the Drainage Services Department (DSD) under Quotation Ref. DEMP/2018/04 to undertake the duties of Environmental Team (ET) as specified in the Environmental Monitoring and Audit (EM&A) Manual and the EP in relation to the odour impact monitoring for the 12-month operation Tuen Mun Area 54 Sewage Pumping Station (TM54SPS). The Further Environmental Permit (Further Environmental Permit (FEP) No. FEP-01/381/2009) was granted by the Environmental Protection Department (EPD) on 20 February 2018.

The Operation Phase First Odour Impact Monitoring Report presents the results of the 1st impact odour monitoring event for operation phase. Monitoring result was first analysed by the Two-Tiered Conservative Approach, as proposed before impact monitoring. However, it is considered that this Two-Tiered Conservative Approach casted an overrated odour impact of the Project which create false alarm, and therefore not appropriate with reference to the impact monitoring data. As such, a refined monitoring results analytic approach, Single-Tiered Conservative Approach, have been adopted. It is observed that there is no exceedance (Action/ Limit Level) of the 24-hour average H_2S concentration for all concerned monitoring stations.

1 Introduction

1.1 Background

In November 2018, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by the Drainage Services Department (DSD) under Quotation Ref. DEMP/2018/04 to undertake the duties of Environmental Team (ET) as specified in the Environmental Monitoring and Audit (EM&A) Manual and the EP in relation to the odour impact monitoring for the 12-month operation Tuen Mun Area 54 Sewage Pumping Station (TM54SPS).

A layout plan of the Project is provided in **Figure1.1**.

1.2 Project Organisation

The organisation chart and lines of communication with respect to the on-site environmental management structure together with the contact information of the key personnel are shown in **Appendix A**.

1.3 Purpose of the Report

The First Odour Impact Monitoring Report (hereinafter as the “this Report”) presents the methodology and results of the 1st operation phase impact odour monitoring. The measured impact odour levels are benchmarked with the Action and Limit Level for assessing the impact during operation of the Project.

1.4 Structure of the Report

The structure of this Report is as follows:

- Section 1: Introduction, background, purpose and the structure of the report
- Section 2: Impact odour monitoring requirements and methodology
- Section 3: Impact odour monitoring results and the event and action plan for operation phase
- Section 4: Summary of Complaints
- Section 5: Conclusions and recommendations

2 Impact Odour Monitoring Requirements and Methodology

2.1 Introduction

H_2S is one of the main components of odour emissions, which can serve as a surrogate indicator for sewage odours. During operation of TM54SPS, measurements of H_2S concentrations at source and at the selected ASRs are required. This is to indicate whether the odour concentration would be higher or lower than the baseline condition. The odour level at sources and meteorological data shall be obtained as reference information for the analysis of the exceedance event.

With reference to the EM&A Manual, an impact monitoring of H_2S measurements shall be conducted in the first year of operation upon commissioning of TM54SPS (i.e. construction of TM54SPS was substantially completed in March 2018). As discussed between DSD and EPD, a new arrangement for the odour monitoring locations and level of measurement for the impact odour monitoring had been established. As it was necessary to deal with some of the major technical issues (e.g. review of H_2S measurement method, monitoring locations and level of measurement, etc) for the impact monitoring, the commencement of the monitoring exercise would be deferred from March 2018 to November 2019. The monitoring location, equipment, methodology and schedule will be discussed in the latter part of this report.

2.2 Monitoring Requirements

In accordance with the EM&A Manual, an operation phase impact odour monitoring programme including odour monitoring stations and methodology was established by ET and agreed with Independent Environmental Checker (IEC) and EPD before commencement of monitoring, which is included in the Method Statement of Odour Impact Monitoring submitted to EPD in November 2019, which is presented in **Appendix B**.

The Event and Action Plan for Air Quality Monitoring (odour) of operational phase stipulated in the EM&A Manual is extracted and presented in **Appendix C**.

2.3 Monitoring Locations

H_2S measurements were taken at the sources and outside the premises of the identified monitoring stations A1, A2 and A5 as shown in **Table 2.1**.

Table 2.1: Monitoring Locations

Monitoring Station	Monitoring Location	Description of Monitoring Station
A1	Planned Secondary School	ASR
A2	Planned Primary School	ASR
A5	Road Connecting to TMS54SPS*	ASR
SPS	Exhausted Vent Pipe of TMA54SPS	Source

*Alternative monitoring location agreed by DSD, IEC and EPD as presented in the Method Statement of Odour Impact Monitoring submitted to EPD in November 2019.

2.4 Monitoring Equipment

H_2S concentrations were measured using a Jerome 631-X type H_2S analyser. Grab air sample is drawn by built-in suction pump of the analyser and passed through a gold film sensor. The electrical resistance of the gold film changes according to the change in mass of hydrogen sulphide in the gas sample.

Table 2.2 summarizes the equipment used in the impact odour monitoring. Copies of the calibration certificates for the portable H_2S analyser are presented in the technical reports in **Appendix D.**

Table 2.2: Odour Monitoring Equipment

Equipment	Model
Portable H_2S analyser	Jerome X631 0003 (Serial no. 2967)

2.5 Monitoring Methodology

A 15-min H_2S concentration was measured every 3 hours for duration of 24 hours at each of the monitoring locations. According to Section 2.35 of the EM&A Manual, impact odour monitoring was taken at a height of predicted worst level of the receivers in the EIA (i.e. 10m above ground level).

During each odour monitoring event, meteorological data including temperature, relative humidity and wind speed was obtained from the nearest Hong Kong Observatory's Tuen Mun Weather Station.

2.6 Monitoring Schedule

As specified in Section 2.53 of the EM&A Manual, impact odour monitoring shall be conducted every three months of the first year of operation for TM54SPS. The first impact odour monitoring event was conducted from 26 to 27 November 2019. The monitoring schedule of the impact monitoring events are presented in **Table 2.3**.

Table 2.3: Schedule of Impact Odour Monitoring Events

Event	Scheduled Date
1st Impact Odour Monitoring Event	26 - 27 November 2019 (Completed)
2nd Impact Odour Monitoring Event	February 2020
3rd Impact Odour Monitoring Event	May 2020
4th Impact Odour Monitoring Event	August 2020

3 Impact Monitoring Results and Analysis

3.1 Monitoring Results

The H_2S concentrations, as well as the meteorological data during the first impact monitoring event have been presented in the Technical Report given in **Appendix D**.

A review of raw data has been conducted and any outliers in the data have be excluded. The excluded outlier data have been extracted in **Table 3.1**.

Table 3.1: Outlier H_2S Concentrations Data

Monitoring Station	Monitoring Period	Outlier Data Recorded Time	Outlier Data (ppb)	Rational to be Outlier Data
A1	26 Nov 2019 21:35 – 21:50	21:41	13	This reading is higher than the maximum H_2S concentrations reading at Source (i.e. 12 ppb).

Detailed results for the odour monitoring event are presented in the technical reports in **Appendix D**.

3.2 Monitoring Results Analysis

3.2.1 Proposed Monitoring Results Analysis Approach Before Impact Monitoring - Two-Tiered Conservative Approach

Prior to commencement of the impact monitoring, results analysis with two-tiered conservative approach have been proposed in the Method Statement of Odour Impact Monitoring submitted in November 2019. The approach consisted the following tiers,

i. First-Tiered Conservative Approach

At the time of baseline odour monitoring, to cope with the uncertainty of reading below 3 ppb (0.003 ppm), for H_2S concentration reading shown on analyser under 3 ppb were converted to 0.

ii. Second-Tiered Conservative Approach

During impact odour monitoring, to cope with the uncertainty of reading below 3 ppb (0.003 ppm), H_2S concentration reading shown on analyser below 3 ppb were recorded as in **Table 3.2** during the impact odour monitoring event.

Table 3.2: Conservative Approach on Reading Interpretation for Readings Below 3 ppb during the Impact Odour Monitoring Event

Reading Shown on Analyser	Reading to be Recorded
0 ppb	0.5 ppb
1 ppb	1.5 ppb
2 ppb	2.5 ppb

With the adoption of the Two-Tiered Conservative Approach, the impact odour monitoring results including the comparison of the impact levels with the Action and Limit levels are summarized in **Table 3.3**.

Table 3.3: Summary of Impact Odour Monitoring Results and Comparison with Action/ Limit Levels

Monitoring Station	Description	24-hour Average H_2S Concentration (ppb)			Exceedance	
		Impact Monitoring Level	Action Level	Limit Level	Action Level	Limit Level
A1	Planned Secondary School	2.8	2.5	2.5	Yes	Yes
A2	Planned Primary School	2.5	2.3	2.5	Yes	No
A5	Road Connecting to TMS54SPS	2.8	2.5	2.5	Yes	Yes
SPS	Exhausted Vent Pipe of TMA54SPS	7.6	-	-	-	-

Exceedances of Action Levels at three monitoring stations (i.e. A1, A2 and A5) and Limit Levels at two monitoring stations (i.e. A1 and A5) were recorded. This is deemed not reflecting the actual case in view of the site observation during impact monitoring, therefore, a review of appropriateness for the Two-Tiered Conservative Approach have been conducted.

3.2.1.1 Review of the Appropriateness for the Two-Tiered Conservative Approach with reference to the 1st Impact Monitoring Event Data

Despite the exceedances observed, the adoption of Two-Tiered Conservative Approach results in a more stringent Action Level during the baseline odour monitoring, and an overrated 24-hour averaged H_2S concentration levels during the impact odour monitoring, which is believed to be the cause of the exceedances. It is considered that this Two-Tiered Conservative Approach casted an overrated odour impact of the Project which create false alarm, and therefore not appropriate with reference to the impact monitoring data.

As such, a refined results analytic approach is proposed, which is considered to cast a more realistic odour impact of the Project.

3.2.2 Refined Monitoring Results Analysis After Impact Monitoring - Single-Tiered Conservative Approach

With reference to the results of the 1st impact monitoring event, and the subsequent review of the appropriateness of the Two-Tiered Conservative Approach, a refined monitoring results analytic approach have been derived and adopted which is considered to reflect the realistic odour impact of the Project. The approach is as follows,

i. Single-Tiered Conservative Approach

The conservative approach during the time of baseline odour monitoring to cope with the uncertainty of reading below 3 ppb (0.003 ppm) (i.e. for H_2S concentration reading shown on analyser under 3 ppb were converted to 0) is the only incorporated conservative approach. While for the impact monitoring, the 24-hour average H_2S concentration is devised from H_2S reading shown on the analyser, without conversion. It is considered that

taking the H_2S concentration reading on analyser during impact monitoring, to compare with the Action and Limit Levels devised based on conservative approach, can reflect the realistic odour impact and at the same time benchmarked with stringent levels.

The impact monitoring results with the incorporation of the Single-Tiered Conservative Approach is adopted and are presented in **Table 3.4**

Table 3.4: Summary of Impact Odour Monitoring Results and Comparison with Action/ Limit Levels

Monitoring Station	Description	24-hour Average H_2S Concentration (ppb)			Exceedance	
		Impact Monitoring Level	Action Level	Limit Level	Action Level	Limit Level
A1	Planned Secondary School	2.4	2.5	2.5	No	No
A2	Planned Primary School	2.0	2.3	2.5	No	No
A5	Road connecting to TMA54SPS	2.5	2.5	2.5	No	No
SPS	Exhausted Vent Pipe of TMA54SPS	7.6	-	-	-	-

In view of the impact odour monitoring results comparison with Action/ Limit Levels, together with site observation during impact monitoring, this approach is deemed to be an interpretation approach presenting a more realistic situation.

It is observed that there is no exceedance (Action/ Limit Level) of the 24-hour average H_2S concentration for all concerned monitoring stations.

3.2.3 Weather Condition during Impact Monitoring

The weather condition during the impact odour monitoring event was mainly fine and wind was mainly mild to moderate. No significant odour sources from the project site were observed during the impact monitoring period.

4 Summary of Complaints

4.1 Summary of Complaints

There was no complaint received by ET in relation to the environmental impact received from TMA54SPS operation commencement to end of the 1st impact monitoring event.

5 Conclusions and Recommendations

5.1 Conclusion and Recommendations

The 1st impact odour monitoring was carried out on 26 - 27 November 2019.

Odour monitoring was conducted at three monitoring stations and the Source. A 15-minute H_2S concentration was measured every 3 hours for a duration of 24 hours. All monitoring equipment used were properly calibrated and have valid calibration certificates.

Monitoring result was first analysed by the Two-Tiered Conservative Approach, as proposed before impact monitoring. Exceedances of Action Levels of 2.5 ppb H_2S concentration at three monitoring stations (i.e. A1, A2 and A5) and Limit Levels of 2.5 ppb H_2S concentration at two monitoring stations (i.e. A1 and A5) were recorded. However, it is considered that this Two-Tiered Conservative Approach casted an overrated odour impact of the Project which create false alarm, and therefore not appropriate with reference to the impact monitoring data.

As such, a refined monitoring results analytic approach, Single-Tiered Conservative Approach, have been derived and adopted. In view of the impact odour monitoring results comparison with Action/ Limit Levels, together with site observation during impact monitoring, this approach is deemed to be an interpretation approach presenting a more realist situation. It is observed that there is no exceedance (Action/ Limit Level) of the 24-hour average H_2S concentration for all concerned monitoring stations.

The weather during the 1st impact monitoring was generally fine and wind was mild to moderate. No significant odour sources from the project site were observed during the impact monitoring period. The measured results were considered representative of the ambient odour conditions for the operation of TM54SPS.

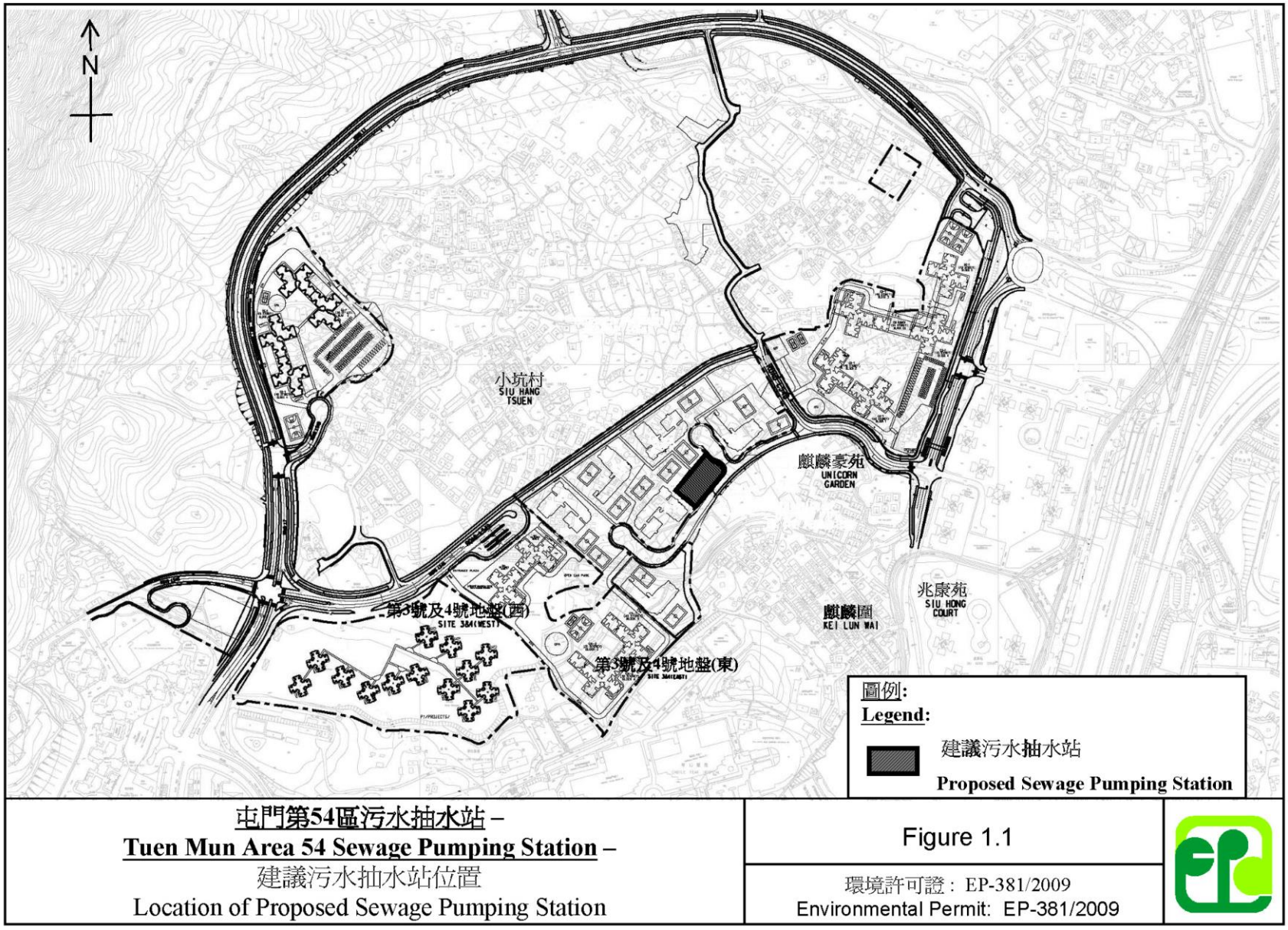
No complaints were received by ET in relation to the environmental impact received from TMA54SPS operation commencement to end of the 1st impact monitoring event.

Figures

Figures

Figure1.1: Layout Plan 12
Figure 2.1: Locations of Impact Odour Monitoring Stations 13

Figure1.1: Layout Plan



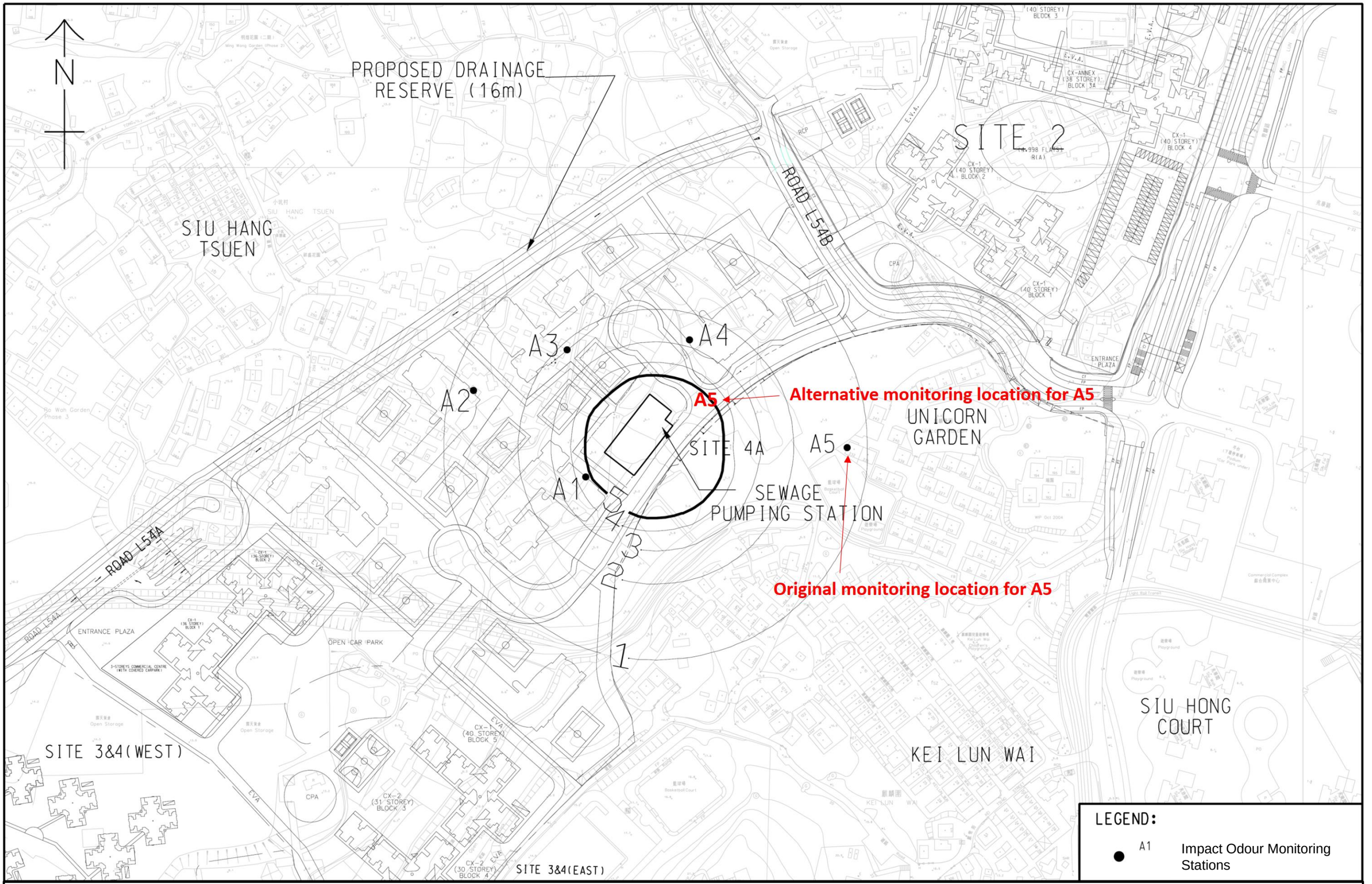


Figure 2.1 Locations of Impact Odour Monitoring Stations

Appendices

Appendices

A. Project Organisation 16
B. Method Statement of Odour Impact Monitoring 17
C. Event and Action Plan for Air Quality (Odour) 18
D. Technical Reports for 1st Impact Odour Monitoring 19

A. Project Organisation

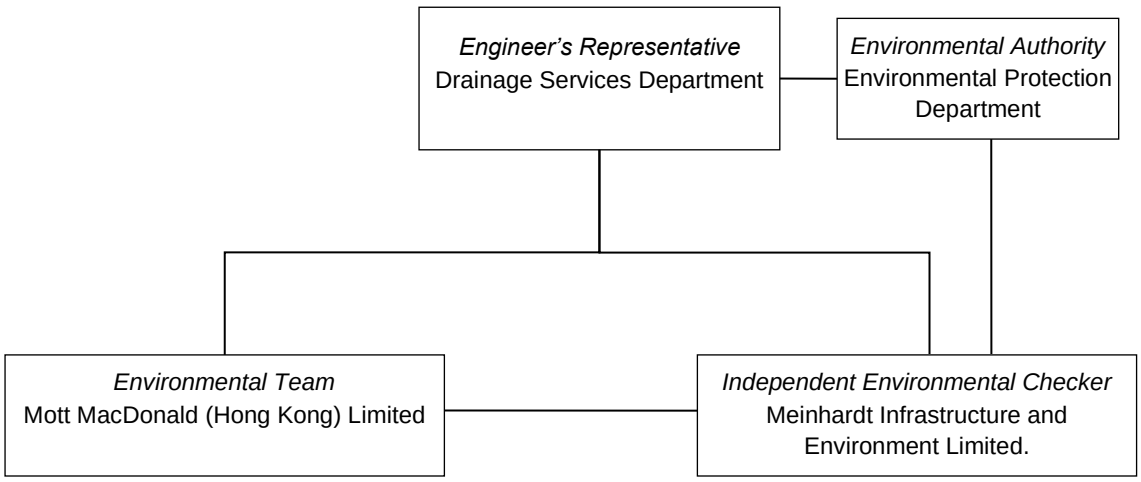


Table A.1: Contact Information

Company / Department	Position	Name	Telephone / Mobile
Drainage Services Department	Engineer's Representative	Mr. Lui Chun-lung, Sam	2594 7306
Meinhardt Infrastructure and Environment Limited	Independent Environmental Checker	Mr. Chiu Wai Kwan	2859 5881
Mott MacDonald (Hong Kong) Ltd.	Environmental Team Leader	Ir Thomas Chan	2828 5967

B. Method Statement of Odour Impact Monitoring

MOTT MACDONALD

Provision of Environmental Team (ET) Services for Tuen Mun Area 54 Sewage Pumping Station

Method Statement of Odour Impact Monitoring

September 2019

Drainage Services Department

This Method Statement of Odour Impact Monitoring for Tuen Mun Area 54 Sewage Pumping Station has been reviewed, certified by the Environmental Team Leader (ETL) and verified by the Independent Environmental Checker (IEC).

Certified by:

Ir Thomas Chan
Environmental Team Leader (ETL)
Mott MacDonald Hong Kong Limited

Date: 30 October 2019

Verified by:

Wai Kwan CHIU
Independent Environmental Checker (IEC)
Meinhardt Infrastructure and Environment Limited

Date: 4 Nov 2019

Mott MacDonald
3/F International Trade Tower
348 Kwun Tong Road
Kowloon
Hong Kong

T +852 2828 5757
F +852 2827 1823
mottmac.hk

Drainage Services Department

Provision of Environmental Team (ET) Services for Tuen Mun Area 54 Sewage Pumping Station

Method Statement of Odour Impact Monitoring

September 2019

Mott MacDonald Hong Kong Limited
registered in Hong Kong no. 236497

Contents

1 Introduction 3
1.1 Background 3
1.2 Purpose of the Method Statement 3
1.3 Structure of the Method Statement 3
1.4 Abbreviation 3

2 Monitoring Requirements 4
2.1 Background 4
2.2 Monitoring Equipment 4
2.3 Monitoring Parameters, Frequency and Duration 5
2.4 Impact Odour Monitoring 5
2.5 Monitoring Programme 6

3 Conclusion 8

Appendix
Appendix A – Technical specification of Jerome X631 0003 H2S Analyzer
Appendix B – Sample of air quality (H2S) monitoring data record sheet
Appendix C – Plan showing the odour monitoring locations for the baseline odour monitoring
Appendix D – Advice on the programme of private land resumption from LandsD
Appendix E – Plan showing the proposed locations of odour monitoring stations for the impact odour monitoring
Appendix F – Monitoring location for exhaust vent pipe from the deodourizing unit

1 Introduction

1.1 Background

In November 2018, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by the Drainage Services Department (DSD) under Quotation Ref. DEMP/2018/04 to undertake the duties of Environmental Team (ET) as specified in the Environmental Monitoring and Audit (EM&A) Manual and the EP in relation to the odour impact monitoring for the 12-month operation Tuen Mun Area 54 Sewage Pumping Station (TMA54SPS).

1.2 Purpose of the Method Statement

With reference to Section 2.53 of the EM&A Manual (AEIAR-122/2008), Hydrogen Sulphide (H_2S) monitoring programme shall be conducted in the first year upon commissioning of TMA54SPS. This method statement presents the methodology and monitoring requirements for the odour impact monitoring according to the EM&A Manual (AEIAR-122/2008).

1.3 Structure of the Method Statement

The structure of the method statement is as follows:

- Section 1 - Background, purpose and the structure of the proposal;
- Section 2 - Monitoring requirements of odour impact monitoring; and
- Section 3 - Conclusion.

1.4 Abbreviation

The following abbreviations are used in this method statement:

ASRs	Air Sensitive Receivers
DSD	Drainage Services Department
LandsD	Lands Department
ET	Environmental Team
IEC	Independent Environmental Checker
EM&A	Environmental Monitoring and Audit
H_2S	Hydrogen Sulphide
MMHK	Mott MacDonald Hong Kong Limited
TMA54SPS	Tuen Mun Area 54 Sewage Pumping Station

2 Monitoring Requirements

2.1 Background

H_2S is one of the main components of odour emissions, which can serve as a surrogate indicator for sewage odours. During commissioning of TMA54SPS, measurements of H_2S concentrations at source and at the selected ASRs are required. This is to indicate whether the odour concentration would be higher or lower than the baseline condition. The odour level at sources and meteorological data shall be obtained as reference information for the analysis of the exceedance event.

The site measurements of the baseline odour monitoring have been conducted in December 2016, March 2017, August 2017 and February 2018. Taking into account the locations of potential representative sensitive receivers in the vicinity of TMA54SPS during its first year of commissioning, the ET proposed and the IEC agreed to adopt alternative odour monitoring stations (A1 to A4) for the baseline odour monitoring, while the monitoring station of A5 remained unchanged. The measurements were taken from a height of 2m above ground level. The Baseline Odour Monitoring Report has been prepared to present the methodology and the measurement results of the baseline odour monitoring. It also established the Action Levels for the operational phase odour impact monitoring in accordance with Table 2.4 of the Final EM&A Manual of the approved EIA of "Tuen Mun Area 54 Sewage Pumping Station" (TMA54SPS) (hereafter known as EM&A Manual). The Report, with IEC's verification, was submitted to EPD for agreement on 9 April 2018. EPD expressed no objection to the Baseline Odour Monitoring Report on 16 May 2018.

With reference to the EM&A Manual, an impact monitoring of H_2S measurements shall be conducted in the first year of operation upon commissioning of TMA54SPS (i.e. construction of TMA54SPS was substantially completed in March 2018). The monitoring measurement shall be conducted by the ET at the same monitoring stations and levels as in the baseline period (as presented in Table 3-1 of the Baseline Odour Monitoring Report). Further to discussions between DSD and EPD in the past few months, a new arrangement for odour monitoring locations and level of measurement for the impact odour monitoring has been established. As it was necessary to deal with some of the major technical issues (e.g. review of H_2S measurement method, monitoring locations and level of measurement, etc) for the impact odour monitoring, the commencement of the monitoring exercise would be deferred from March 2018 to October 2019. The scheduling of the monitoring programme as well as the new locations of monitoring stations and level of measurement would be discussed in the latter part of this method statement.

2.2 Monitoring Equipment

2.2.1 Monitoring Equipment

Portable H_2S analyser, type Jerome 631-X H_2S, or equivalent will be used for H_2S sampling. The analyser fulfils the following requirements:

- able to measure H_2S concentration in the range of 1ppb to 50ppm, with resolution of 1ppb;
- operates within a temperature range of 0 to 40^{o}C, at an air flow rate of 0.15 L/min; and
- with built-in suction pump to draw air sample and passed through a gold film sensor.

The H_2S concentration is measured by the analyser through drawing a grab air sample by built-in suction pump of a portable H_2S analyser and passed across a gold film sensor.

2.2.2 Conservative Approach on Reading Interpretation

According to the analyser technical specifications as attached in **Appendix A**, it is noticed that the equipment sensitivity is 0.003ppm H_2S, while the detection range is 3 ppb (0.003ppm) – 50 ppm in four graduated ranges. To cope with the uncertainty of reading below 3ppb, a conservative approach on reading interpretation will be adopted.

During the odour impact monitoring, for readings below 3ppb, it will be recorded as in **Table 2.1**.

Table 2.1: Conservative Approach on Reading Interpretation for Readings Below 3ppb

Reading Shown on Analyser	Reading to be Recorded
0 ppb	0.5 ppb
1 ppb	1.5 ppb
2 ppb	2.5 ppb

2.3 Monitoring Parameters, Frequency and Duration

A 15-min H_2S concentration will be measured every 3 hours for duration of 24 hours at the agreed monitoring locations and level of measurement, including at the exhausted vent pipe from deodorizing unit. Monitoring will not be conducted on rainy days.

Besides, hourly meteorological data including temperature, wind speed and direction during the sampling period will be obtained from the nearest Hong Kong Observatory's Tuen Mun Weather Station.

Appendix B shows a sample of Air Quality (H_2S) Monitoring Data Record Sheet.

2.4 Impact Odour Monitoring

In accordance with Section 2.34 of the EM&A Manual, H_2S measurements will be taken at source and outside the premises of the identified ASRs for the impact odour monitoring. As discussed between DSD and EPD, new arrangements for odour monitoring locations and level of measurement for the impact odour monitoring have been established.

Monitoring locations for ASRs and the source are presented in the following paragraphs.

2.4.1 Monitoring Locations for ASRs

For the baseline odour monitoring, it was conducted at the original monitoring location for A5 as given in the EM&A Manual, and the alternative monitoring locations for A1 to A4 which were agreed with the IEC and CEDD and approved by EPD. The measurements were taken from a height of 2m above ground level at the agreed monitoring locations. A plan showing the odour monitoring locations for the baseline odour monitoring is given in **Appendix C.**

However, EPD raised that the odour monitoring stations and level of measurement for the impact odour monitoring should be further reviewed based on the latest site development and locations of potential representative sensitive receivers in the vicinity of TMA54SPS. Having reviewed, the odour measurement for the impact odour monitoring would be taken at a height of 10m above ground level, which is the predicted worst level of the receivers as stated in the EM&A Manual. A truck mounted working platform would be employed for the odour measurement at a height of 10m above ground level. As regards the locations of odour monitoring stations, it is noticed that there are 3 odour monitoring stations selected in the EM&A Manual (i.e. A3-A5) are currently

located in private lots which are not accessible for the ET to conduct the impact odour monitoring at a height of 10m above ground level, while the remaining 2 stations (i.e. A1 and A2) fall within CEDD's construction sites (i.e. Government land). As advised by LandsD (attached in **Appendix D**), the private land resumption (for A3 and A4) are planned to be made in July 2020, while the private land (for A5) will not be resumed. As the monitoring station "A5" which falls within the boundary of private open car park, DSD approached the car park company staff in person in March 2019 to see whether they could give permission for the ET to conduct the odour monitoring at 10m high by using a truck-mounted lifting platform in their car park. However, they turned down our request with a verbal response that any activities other than car parking were not allowed in the car park. As such, the alternative location of odour monitoring station for A5 should be proposed. It is noted that the sites on both sides of the road connecting to TMA54SPS are all private land lots, expect that TMA54SPS and the road itself are on government land. The odour monitoring station “A5” should be relocated to somewhere on the road connecting to TMA54SPS. In addition, according to the contours of odour concentrations at 10m above ground, the original location of A5 is within 1 OU zone which is the furthest measurement point from TMA54SPS. As a prudent approach in determine the alternative location of odour monitoring station for A5, we propose that a new A5 is situated on the road connecting to TMA54SPS at a location within 4 OU zone which is close to TMA54SPS. In view of the land resumption programme, the impact odour monitoring will be spilt into two phases. The 1st phase will include the odour monitoring at the locations A1, A2 and new A5, while A3 and A4 will be included in the 2nd phase after the completion of private land resumption in July 2020. A plan showing the proposed locations of odour monitoring stations for the impact odour monitoring is attached in **Appendix E**.

2.4.2 Monitoring at Source

H_2S measurements will be taken at the exhaust vent pipe from the deodourizing unit to obtain H_2S concentrations at source. The selected location is shown in **Appendix F.**

2.5 Monitoring Programme

As stipulated in Section 2.53 of the EM&A Manual, the H_2S monitoring will be conducted every three months for the first year of operation for TM54SPS. However, due to some major technical issues (e.g. review of H_2S measurement method, monitoring locations and level of measurement, etc), the commencement of the impact odour monitoring was deferred from March 2018 to October 2019. In addition, as discussed between DSD and EPD, measurement results from the impact odour monitoring will be directly compared with that obtained in the baseline odour monitoring without any adjustments/ air modelling applied. If all monitoring results are below the limit levels, the impact monitoring will be ceased. If the monitoring results of detected odour monitoring concentration at any ASR is higher than the limit levels due to operation of the TM54SPS, the odour monitoring will be extended until the odour concentration at the ASR in consecutive 2 times are below the limit levels (once for 3 months). Action and Limit Levels for Air Quality in operation phase are given in **Table 2.2**.

Regarding the above requirements, a tentative monitoring programme is shown in **Table 2.3**.

Table 2.2: Action and Limit Levels for Air Quality (Operation Phase)

Parameter	ASR	Action Level (ppb)	Limit Level (ppb)
H_2S	A1	2.5	2.5
	A2	2.3	2.5
	A3	2.5	2.5
	A4	2.5	2.5
	A5	2.5	2.5
Incidents of odour complaints	-	Any incidence of odour complaint received through the Odour Complaint Register	Two or more complaints through the Odour Complaint Register within three months

Note: (1) Odour complaints are to be handled in accordance with the complaint registration system as mentioned in Section 2.26-2.29 of the EM&A Manual

Table 2.3: Tentative Monitoring Programme

For 1st phase impact odour monitoring at A1, A2 and new A5:

	1st Monitoring Event	2nd Monitoring Event	3rd Monitoring Event	4th Monitoring Event
Monitoring Dates	November 2019	February 2020	May 2020	August 2020

For 2nd phase impact odour monitoring at A3 and A4:

	1st Monitoring Event	2nd Monitoring Event	3rd Monitoring Event	4th Monitoring Event
Monitoring Dates	August 2020	November 2020	February 2021	May 2021

3 Conclusion

Overall, the impact odour monitoring will be implemented in accordance with the recommendations of the approved EIA report (AEIAR-122/2008). The impact odour monitoring will be split into 2 phases. The first monitoring events under the 1st phase and 2nd phase are tentatively scheduled for November 2019 and August 2020, respectively. If all monitoring results are below the limit levels, the impact monitoring will be ceased. If the monitoring results of detected odour monitoring concentration at any ASR is higher than the limit levels due to operation of the TMA54SPS, the odour monitoring will be extended until the odour concentration at the ASR in consecutive 2 times are below the limit levels (once for 3 months).

Appendices

Appendix A Technical Specification of Jerome X631 0003 H2S Analyzer

Jerome X631 0003 Gold Film Hydrogen Sulphide Analyzer
Technical Specifications

Resolution:	0.001 ppm
Detection Range:	3 ppb (0.003 ppm) – 50 ppm in four graduated ranges
Sensitivity:	0.003ppm H_2S
Precision:	5% relative standard deviation
Accuracy:	Range 0: ± 0.003ppm at 0.050ppm H2S Range 1: ± 0.03ppm at 0.50ppm H2S Range 2: ± 0.3ppm at 5.0ppm H2S Range 3: ± 2ppm at 25ppm H2S
Operating Environment:	0 – 40°C Non-Condensing, Non-Explosive
Response Time-Sample Mode:	10 to 50 ppm (Range 3): 13 seconds 1.0 to 10.0 ppm (Range 2): 16 seconds 0.10 to 1.00 ppm (Range 1): 25 seconds 0.001 to 0.100 ppm (Range 0): 30 seconds
Response Time-Survey Mode:	10 to 50 ppm (Range 3): 3 seconds 1.0 to 9.9 ppm (Range 2): 6 seconds 0.10 to 0.99 ppm (Range 1): 15 seconds 0.001 to 0.099 ppm (Range 0): 20 seconds
Flow Rate:	150 ± 10 ml/min (0.15 ± litres/min)
Power Requirements:	100-120 V~, 50/60 Hz, 1 A or 220-240 V~, 50/60 Hz, 1 A
Fuse:	F1A 250V, 5mm X 20mm
Internal Battery Pack:	Rechargeable nickel cadmium
Case Construction:	Aluminium alloy
Dimensions:	33 cm L x 15 cm W x 10 cm H (13" L x 6" W x 4" H)
Weight:	3.18 kilos (7 pounds)
Digital Meter Display:	Liquid crystal display (LCD)
Data Output:	1. RS-232 Serial, Baud Rate 1200 for use with data logger, and/or Jerome® communication program. 2. RS-232 Serial data format with 0 & 20mA current logic levels; Baud Rate 1200 (special industrial applications) and Analog 20 mA output.

Appendix B Sample of Air Quality (H_2S) Monitoring Data Record Sheet

APPENDIX B Air Quality (H_2S) Monitoring Data Record Sheet

General Information					
Monitoring Location					
Date					
Weather					
Monitoring Results					
Sample No.	**Time**	**Wind Speed**	**Wind Direction**	**Temperature**	***Level (ppb)***
Sample 1	Start:				
	Stop:				
Sample 2	Start:				
	Stop:				
Sample 3	Start:				
	Stop:				
Sample 4	Start:				
	Stop:				
Sample 5	Start:				
	Stop:				
Sample 6	Start:				
	Stop:				
Sample 7	Start:				
	Stop:				
Sample 8	Start:				
	Stop:				
Other Observations					

Name & Designation Signature Date

Recorded by:

Checked by:

Appendix C Plan Showing the Odour Monitoring Locations for the Baseline Odour Monitoring

APPENDIX C: PLAN SHOWING THE ODOUR MONITORING LOCATIONS FOR THE BASELINE ODOUR MONITORING

Appendix D Advice on the Programme of Private Land Resumption from Lands Department

☐ Urgent ☐ Return receipt ☐ Sign ☐ Encrypt ☐ Mark Subject Restricted ☐ Expand personal&public groups

Re: Equiry on Land Use Status (Nearby Tuen Mun Area 54 Sewage Pumping Station)

12/07/2019 10:17

From: TW CHOI/LAO/LANDSD/HKSARG@LANDSD
To: Chun Lung LUI/E&MP/DSD/HKSARG@DSD
Serial No.:

Dear Sam,

Please be advised that for Land Nos.1, 2 and 4 as shown at our LSP, the tentative land reversion date is 4/2020 and land clearance date (site handover to CEDD) is 7/2020.

Thank you.

Best Regards,
Jessica T.W. CHOI
LE/SD, DLO/TM
Tel: 2451 3310

Chun Lung LUI	Dear Jessica, We spoke. Grateful for your a...	2019/07/12 上午 10:03:49

From: Chun Lung LUI/E&MP/DSD/HKSARG@DSD
To: TW CHOI/LAO/LANDSD/HKSARG@LANDSD,
Date: 2019/07/12 上午 10:03
Subject: Re: Equiry on Land Use Status (Nearby Tuen Mun Area 54 Sewage Pumping Station)

Dear Jessica,

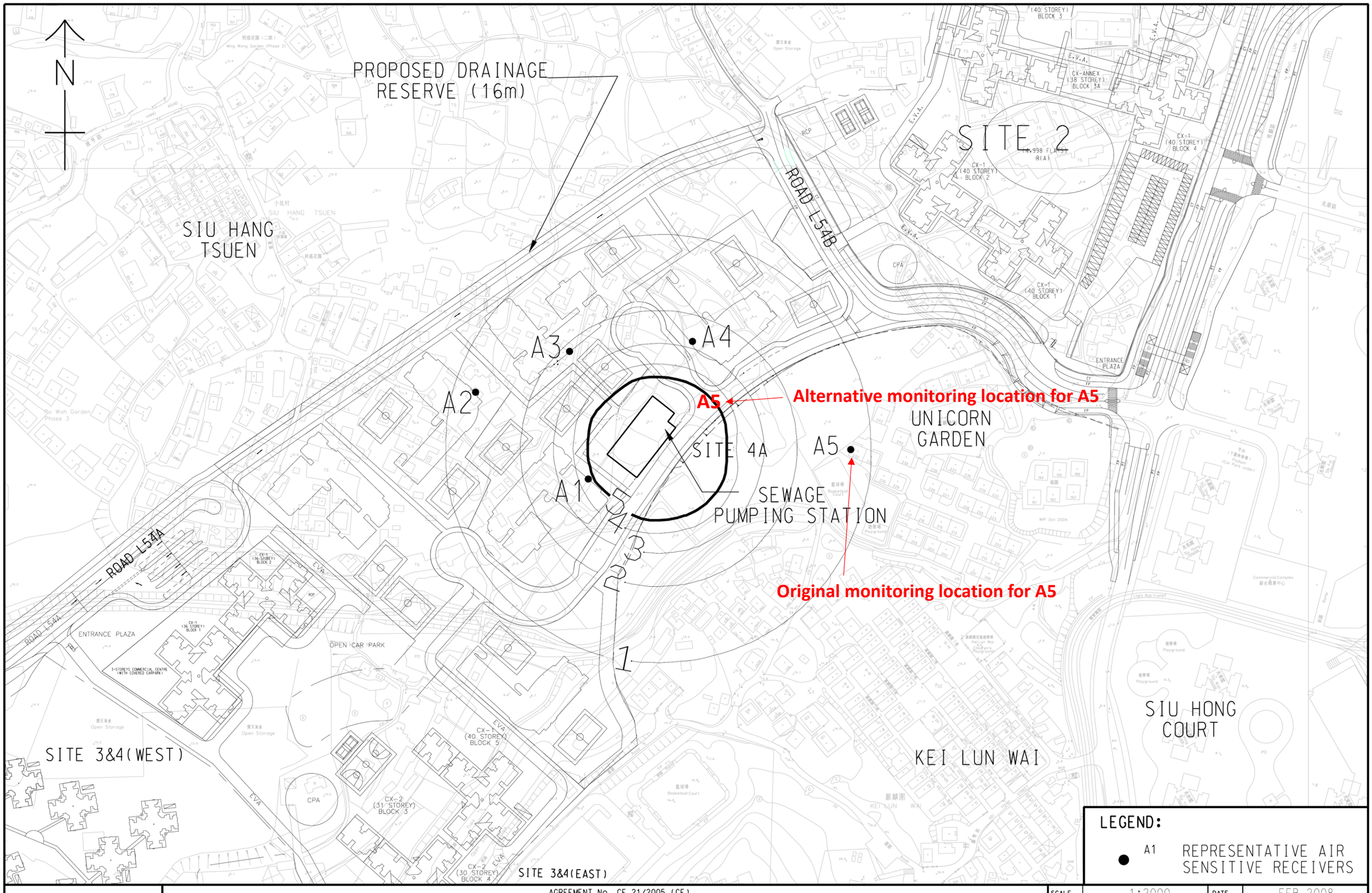
We spoke. Grateful for your advice on the tentative land resumption schedule for Land No. 1, No. 2 and No. 4 as indicated in the attached LSP. Many thanks.

Best Regards,

LUI Chun-lung, Sam
EME/P1/2, E&MP, DSD
Office: 2594 7306
Mobile: 6070 0441

TW CHOI	Dear Sam, Preceding email refers.	04/06/2019 15:38:51
Chun Lung LUI	Dear Ms. CHOI, We spoke. Grateful if you c...	2019/06/04 上午 11:03:45

Appendix E Plan Showing the Proposed Locations of Odour Monitoring Stations for the Impact Odour Monitoring



MAUNSELL | AECOM
Maunsell Consultants Asia Ltd

AGREEMENT No. CE 21/2005 (CE)
FORMATION, ROADS AND DRAINS IN AREA 54, TUEN MUN - PHASES 1 AND 2 -
ENVIRONMENTAL, TRAFFIC AND DRAINAGE IMPACT ASSESSMENT REVIEW - INVESTIGATION
ADDITIONAL SERVICE No.2 - ENVIRONMENTAL IMPACT ASSESSMENT FOR TUEN MUN AREA 54 SEWAGE PUMPING STATION

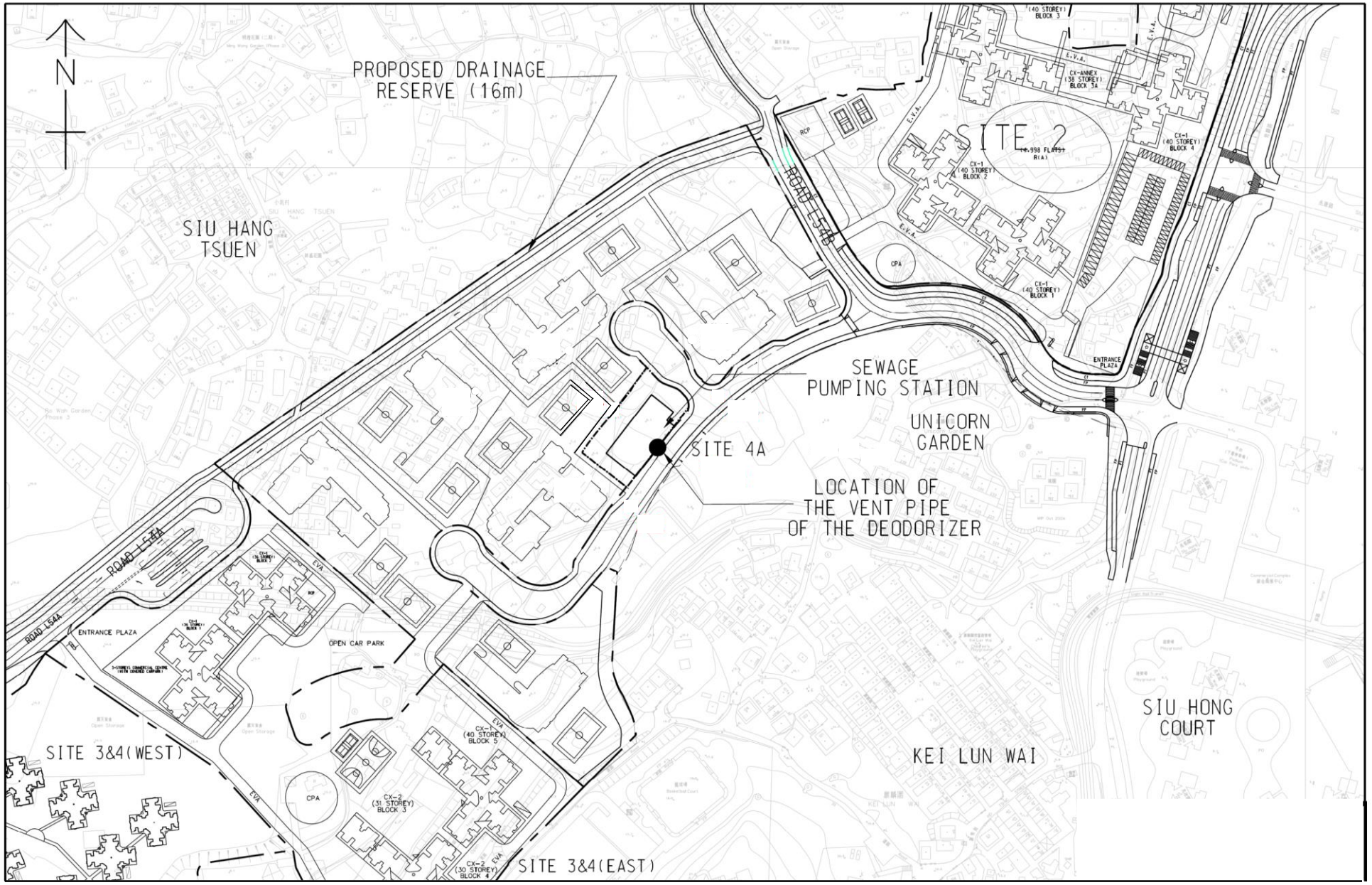
CONTOURS OF ODOUR CONCENTRATION (OU/5-sec avg) AT 10m ABOVE GROUND - MITIGATED SCENARIO

SCALE	1:2000	DATE	FEB 2008
CHECK		DRAWN	SWKY
JOB No.	60021938	DRAWING No.	3.3
		REV	-

Unicorn Garden
A1
A5
Tuen Mun Area 54 SPS
A2
A4
A3
Road L54B
Road L54A

Appendix F Monitoring Location for Exhaust Vent Pipe from the Deodourizing Unit

APPENDIX F: MONITORING LOCATION FOR EXHAUST VENT PIPE FROM THE DEODOURIZING UNIT



mottmac.hk

C. Event and Action Plan for Air Quality (Odour)

Table C.1: Event/Action Plan for Air Quality Monitoring (Operational Phase)

EVENT	ACTION		
	ET	IEC	ER (DSD)
Exceedance of Action level	1. Identify source/ reason of exceedance; 2. Inform IEC and ER(DSD); 3. Carry out investigation to identify the source/reason of exceedance or complaints. Investigation shall be completed within 1 week and advise the findings to IEC and DSD; 4. Repeat measurement to confirm finding after rectification work.	1. Check with ET and ER(DSD) on the operating activities and implementation of odour mitigation measures; 2. Discuss with ER(DSD) on the possible remedial actions; 3. Advise the ER(DSD) on the effectiveness of the proposed remedial measures; 4. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Rectify any unacceptable practice; 3. Amend working methods as required; 4. Implement amended working methods.
Exceedance of Limit level	1. Notify IEC, ER(DSD) and EPD; 2. Identify source of odour; 3. Increase monitoring frequency; 4. Carry out investigation to identify the source/reason of exceedance. Investigation shall be completed within 1 week and advise the findings to IEC and ER(DSD); 5. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 6. Assess effectiveness of the remedial actions and keep IEC, EPD and ER(DSD) informed of the results.	1. Check with ET and ER(DSD) on the operating activities and implementation of odour mitigation measures; 2. Review the proposed remedial actions whenever necessary to assure their effectiveness and advise the ER(DSD) accordingly; 3. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Rectify any unacceptable practice and amend working methods as required; 3. Formulate remedial actions and inform ET and IEC; 4. Ensure amended working methods and remedial actions properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and stop that portion of work until the exceedance is abated.

D. Technical Reports for 1st Impact Odour Monitoring

First Operation Phase Odour Impact Monitoring Report

Impact Odour Monitoring - H_2S Measurement for Tuen Mun Area 54 Sewage Pumping Station | Hong Kong

0118/19/ED/0255 01 | 5 December 2019

For review

Mott Macdonald Hong Kong Limited

Executive Summary

Fugro Technical Services Limited (FTS) has been appointed by Mott MacDonald Hong Kong Limited, the Project Environmental Team (ET) of Tuen Mun Area 54 Sewage Pumping Station (TMA54SPS) to undertake the operation phase impact odour monitoring for the project.

This is the first monitoring event for the first Phase Odour Impact Monitoring Report for TMA54SPS prepared by Fugro Technical Services Limited for submission to Mott MacDonald Hong Kong Limited.

This report presents the results obtained from the first operation phase impact odour monitoring carried out from 26 November 2019 to 27 November 2019 during the operation of TMA54SPS.

It is observed that there is no exceedance (Action/ Limit Level) of the 24-hour average H_2S concentration for the concerned monitoring stations A1, A2 and A5.

Contents

Executive Summary		**i**
1.	**Introduction**	**1**
1.1	Background	1
1.2	Project Description	1
1.3	Monitoring Arrangement	2
2.	**Odour Impact Monitoring**	**4**
2.1	Methodology	4
2.2	Sampling Duration	4
2.3	Monitoring Locations	4
2.4	Quality Assurance / Quality Control	4
3.	**Monitoring Results**	**5**
3.1	Weather Conditions and Other Factors	5
3.2	Monitoring Results	5
4.	**Odour Complaint**	**5**
5.	**Conclusion and Recommendations**	**5**

Appendices

Appendix A Monitoring Station

Appendix B Photographs of Monitoring Stations

Appendix C Monitoring Results

Appendix D Site Record

Appendix E Data Logger Record

Appendix F Calibration Certificates

Appendix G Meteorological Conditions

Tables in the Main Text

Table 1.1 Action and Limit Levels for Air Quality (Operation Phase) 3
Table 1.2 Tentative Monitoring Programme 3
Table 2.1 Equipment for Baseline Odour Monitoring 4
Table 2.2 Monitoring Locations 4
Table 3.1 Summary of Monitoring Results 5

Abbreviations

ASRs	Air Sensitive Receivers
DSD	Drainage Services Department
LandsD	Lands Department
ET	Environmental Team
EM&A	Environmental Monitoring and Audit
H_2S	Hydrogen Sulphide
MMHK	Mott MacDonald Hong Kong Limited
FTS	Fugro Technical Services Limited
TMA54SPS	Tuen Mun Area 54 Sewage Pumping Station
OU	Odour Unit

1. Introduction

1.1 Background

To cope with a shortfall in flat supply and a rise in housing demand, Tuen Mun Area 54 was identified by the Government as one of the areas having the potential for housing development. Thus, the New Territories West Development Office of Territory Development Department completed the "Planning and Development Study of Potential Housing Site in Area 54, Tuen Mun" in 1999. The Study put forward proposals on housing types, development parameters and planning layouts and assessed the development impacts on transport network, infrastructural capacities and environmental quality.

According to the Review of Tuen Mun and Tsing Yi Sewerage Master Plans, a new sewage pumping station is needed to convey sewage collected from Tuen Mun Area 54 to existing trunk sewers at Ming Kum Road. Other than Tuen Mun Area 54, TMA54SPS will also collect sewage from four recognized villages within Area 54 including Tsz Tin Tsuen, Po Tong Ha, Kei Lun Wai and Siu Hang Tsuen, and the proposed Tuen Mun North Sewage Pumping Station in Area 52. TMA54SPS has a capacity of about 90,000m^3 per day; the design average dry weather flow is approximately 0.32m^3/s.

TMA54SPS is located in the central part of Site 4A of Tuen Mun Area 54, north of Kei Lun Wai, south of Tsz Tin Tsuen and west of Site 2 of Tuen Mun Area 54. Site 4A is zoned "Government, Institution or Community" on the Tuen Mun Outline Zoning Plan No. S/TM/22 and is reserved for school development. **Appendix A** shows the location of TMA54SPS. Construction work for TMA54SPS is substantially completed and commissioning is anticipated in February 2018.

TMA54SPS is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 449). A study of Environmental Impact Assessment (EIA) has been carried out to evaluate the environmental impacts associated with the project. An EIA Report and an Environmental Monitoring and Audit (EM&A) Manual were approved by the Environmental Protection Department (EPD) on 12 November 2008. An Environmental Permit (EP) No. EP-381/2009 was issued on 4 January 2010 for TMA54SPS to the Civil Engineering and Development Department as the Permit Holder. The EP stipulates that an EM&A programme is required to ensure mitigation measures recommended in the EIA Report and the EM&A Manual are implemented during the construction and operation of TMA54SPS.

1.2 Project Description

FTS was commissioned to carry out operation phase odour impact monitoring for Mott MacDonald Hong Kong Limited for the project of TMA54SPS.

The EIA study of TMA54SPS has identified odour emissions from the sewage pumping station as the main potential air quality impact. To reduce odour emissions from the operation of TMA54SPS, it is recommended in the EIA Report that wet wells and screen chambers, the main

sources of odour, should be enclosed in a building structure. A deodorizing unit should also be installed; in order to treat vented air before it would be discharged into the atmosphere.

Furthermore, odour monitoring is required as per the EM&A Manual prior to and during the initial operation of TMA54SPS. The purpose of the odour impact monitoring is to indicate whether the odour concentration would be higher or lower than the baseline condition.

1.3 Monitoring Arrangement

According to the EM&A Manual, gaseous hydrogen sulphide (H_2S) is one of the main components of odour emissions. Ambient H_2S concentration can serve as a surrogate indicator for sewage odours as it can be readily monitored at the Air Sensitive Receivers (ASRs).

The odour impact monitoring shall be conducted in the first year upon commissioning of TMA54SPS. Odour Impact Monitoring would be conducted every three months for the first year of operation for TMA54SPS. However, due to some major technical issues (e.g. review of H_2S measurement method, monitoring locations and level of measurement, etc), the commencement of the impact odour monitoring was deferred from March 2018 to October 2019. In addition, as discussed between DSD and EPD, measurement results from the impact odour monitoring will be directly compared with that obtained in the baseline odour monitoring without any adjustments / air modelling applied. If all monitoring results are below the limit levels, the impact monitoring will be ceased. If the monitoring results of detected odour monitoring concentration at any ASR is higher than the limit levels due to operation of the TMA54SPS, the odour monitoring will be extended until the odour concentration at the ASR in consecutive 2 times are below the limit levels (once for 3 months). Action and Limit Levels for Air Quality in operation phase are given in **Table 1.1**.

As regards the locations of odour monitoring stations, it is noticed that there are 3 odour monitoring stations selected in the EM&A Manual (i.e. A3-A5) are currently located in private lots which are not accessible for the ET to conduct the impact odour monitoring at a height of 10m above ground level, while the remaining 2 stations (i.e. A1 and A2) fall within CEDD's construction sites (i.e. Government land). As the monitoring station "A5" which falls within the boundary of private open car park, alternative location of odour monitoring station for A5 was proposed. It is noted that the sites on both sides of the road connecting to TMA54SPS are all private land lots, expect that TMA54SPS and the road itself are on government land. The odour monitoring station "A5" should be relocated to somewhere on the road connecting to TMA54SPS. In addition, according to the contours of odour concentrations at 10m above ground, the original location of A5 is within 1 OU zone which is the furthest measurement point from TMA54SPS. As a prudent approach in determine the alternative location of odour monitoring station for A5, the new A5 is situated on the road connecting to TMA54SPS at a location within 4 OU zone which is close to TMA54SPS. In view of the land resumption programme, the impact odour monitoring will be spilt into two phases. The 1st phase will include the odour monitoring at the locations A1, A2 and new A5.

Regarding the above requirements, a tentative monitoring programme is shown in **Table 1.2**.

Table 1.1 Action and Limit Levels for Air Quality (Operation Phase)

Parameter	ASR	Action Level (ppb)	Limit Level (ppb)
H_2S	A1	2.5	2.5
	A2	2.3	2.5
	A5	2.5	2.5
Incidents of odour complaints	-	Any incidence of odour complaint received through the Odour Complaint Register	Two or more complaints through the Odour Complaint Register within three months

Note: Odour complaints are to be handled in accordance with the complaint registration system as mentioned in Section 2.26-2.29 of the EM&A Manual

Table 1.2 Tentative Monitoring Programme

For 1st phase impact odour monitoring at A1, A2 and new A5:

	1st Monitoring Event	2nd Monitoring Event	3rd Monitoring Event	4th Monitoring Event
Monitoring Dates	November 2019	February 2020	May 2020	August 2020

2. Odour Impact Monitoring

2.1 Methodology

The H_2S analyzer, type Jerome 631-X, was used for the impact monitoring. Grab air sample was drawn by built-in suction pump of the analyzer and passed through a gold film sensor. The electrical resistance of the gold film changes according to the change in mass of hydrogen sulphide in the gas sample.

The details of the equipment used for odour impact monitoring is presented in **Table 2.1**

Table 2.1 Equipment for Baseline Odour Monitoring

Equipment	Manufacturer / Model	Serial Number	Sensor Number	Calibration Date	Next Calibration Date
Gold Film Hydrogen Sulphide Analyzer	JEROME X631 0003	2967	16-4-13-V2DS	17 January 2019	16 January 2020

2.2 Sampling Duration

A 15-min integrated gaseous H_2S sample was collected every 3 hours for a period of 24 hours at monitoring locations, in which five readings were recorded at every monitoring station during each 3-hour session. Maximum and minimum H_2S levels for each monitoring station were recorded.

2.3 Monitoring Locations

H_2S measurements was taken at the sources and outside the premises of the identified ASRs as shown in **Table 2.2** and **Appendix A** show the descriptions and locations of the H_2S monitoring stations.

Table 2.2 Monitoring Locations

Monitoring Station	Monitoring Location	Description
A1[1]	Planned Secondary School	ASR
A2[1]	Planned Primary School	ASR
A5[1]	Road connecting to TMA54SPS	ASR
SPS[1]	Exhausted vent pipe of TMA54SP	Source

Note: [1] 1st phase odour impact monitoring.

According to the EM&A Manual, the monitoring was taken at a height of predicted worst level of the receivers in the EIA (10 m ground level). Photos showing the monitoring setup are included in **Appendix B**.

2.4 Quality Assurance / Quality Control

In order to ensure the analyzer is functioning properly, manual sensor regeneration and zero adjustment were performed before each set of odour monitoring.

Calibration of the analyzer is conducted every year at the laboratory of the manufacturer. The calibration certificates for the analyzers are shown in **Appendix F**.

3. Monitoring Results

3.1 Weather Conditions and Other Factors

The first monitoring event for the first phase operation phase odour impact monitoring for TMA54SPS was conducted from 26 November 2019 (approx. 11:00 am) to 27 November 2019 (approx. 10:00 am).

The weather was mainly fine and wind was mainly mild to moderate during the monitoring event. An anemometer was used for measuring wind speed and wind direction presented in the site record in **Appendix D**. Meteorological conditions of 26 November 2019 and 27 November 2019 obtained from the nearest Hong Kong Observatory's Tuen Mun Weather Station are shown in **Appendix G**. Meteorological data was obtained as reference information for the analysis of the exceedance event.

No significant odour sources from the project site were observed during the impact monitoring period.

3.2 Monitoring Results

The monitoring results are summarised in **Table 3.1**. Details of monitoring data are shown in **Appendix C** (24-hour average, maximum and minimum H_2S concentration), **Appendix D** (site record) and **Appendix E** (data logger record).

Table 3.1 Summary of Monitoring Results

Monitoring Station	Monitoring Location	24-hour Average H2S Concentration (ppb)
A1[1]	Planned Secondary School	2.4
A2[1]	Planned Primary School	2.0
A5[1]	Road connecting to TMA54SPS	2.5
SPS	Exhausted vent pipe of TMA54SP	7.6

Note: [1] Air Sensitive Receiver.

4. Odour Complaint

There were no complaints received in relation to the environmental impact during the reporting period.

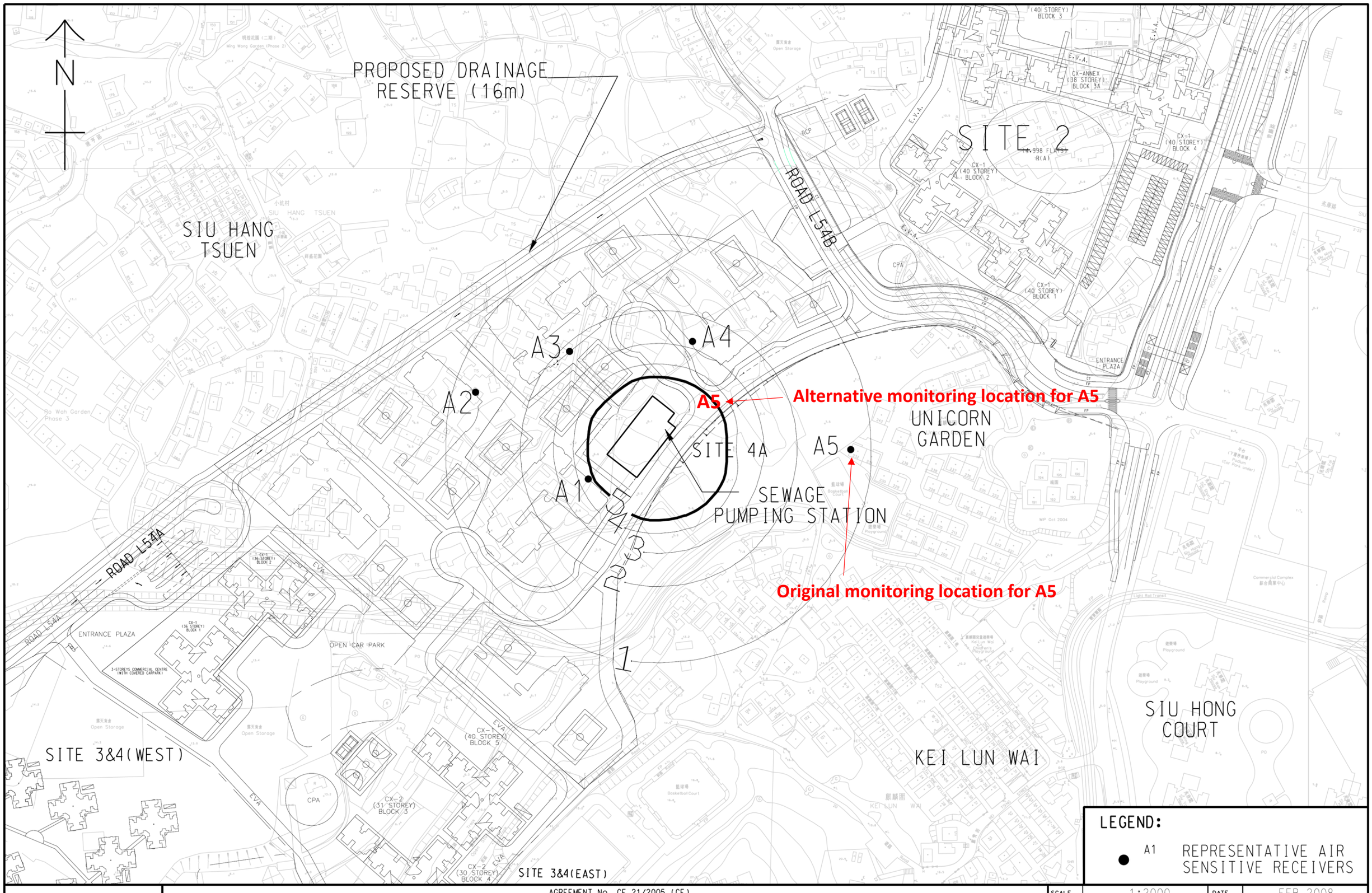
5. Conclusion and Recommendations

The first monitoring event for the first phase odour impact monitoring was carried out from 26 November 2019 to 27 November 2019.

Odour impact monitoring of hydrogen sulphide (H_2S) was conducted at four monitoring stations including three Air Sensitive Receivers around TMA54SPS and at source. It is observed that there is no exceedance (Action/ Limit Level) of the 24-hour average H_2S concentration for the concerned monitoring stations A1, A2 and A5.

Appendix A

Monitoring Station



MAUNSELL | AECOM
Maunsell Consultants Asia Ltd

AGREEMENT No. CE 21/2005 (CE)
FORMATION, ROADS AND DRAINS IN AREA 54, TUEN MUN - PHASES 1 AND 2 -
ENVIRONMENTAL, TRAFFIC AND DRAINAGE IMPACT ASSESSMENT REVIEW - INVESTIGATION
ADDITIONAL SERVICE No.2 - ENVIRONMENTAL IMPACT ASSESSMENT FOR TUEN MUN AREA 54 SEWAGE PUMPING STATION

CONTOURS OF ODOUR CONCENTRATION (OU/5-sec avg) AT 10m ABOVE GROUND - MITIGATED SCENARIO

SCALE	1:2000	DATE	FEB 2008
CHECK		DRAWN	SWKY
JOB No.	60021938	DRAWING No.	3.3
		REV	-

Unicorn Garden
Source
A1
A5
Tuen Mun Area 54 SPS
A2
A4
A3
Road L54B
Road L54A

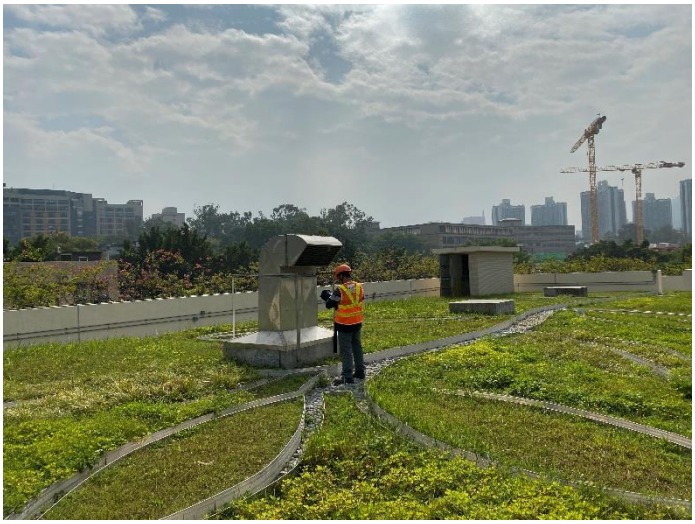
Appendix B

Photographs of Monitoring Stations

A1

A5

A2



Source

Appendix C

Monitoring Results

Monitoring Station	Time Interval	24-hour Average H2S Concentration (ppb) 1st Event for Phase One Odour Impact Monitoring (26 – 27 November 2019)							
		15-minute integrated average	24-hour average	Maximum	Minimum	Action Level	Exceedance	Limit Level	Exceedance
A1	1100-1400	2.2	2.4	4.5	1.8	2.5	N	2.5	N
	1400-1700	2.0							
	1700-2000	2.2							
	2000-2300	4.5							
	2300-0200	2.0							
	0200-0500	2.4							
	0500-0800	2.2							
	0800-1100	1.8							
A2	1100-1400	2.2	2.0	2.2	1.6	2.3	N	2.5	N
	1400-1700	2.2							
	1700-2000	2.0							
	2000-2300	2.0							
	2300-0200	2.0							
	0200-0500	1.6							
	0500-0800	2.0							
	0800-1100	2.0							
A5	1100-1400	2.6	2.5	2.6	2.2	2.5	N	2.5	N
	1400-1700	2.6							
	1700-2000	2.6							
	2000-2300	2.4							
	2300-0200	2.4							
	0200-0500	2.2							
	0500-0800	2.4							
	0800-1100	2.4							
SPS	1100-1400	6.8	7.6	8.8	5.6	N/A	N/A	N/A	N/A
	1400-1700	7.2							
	1700-2000	5.6							
	2000-2300	7.8							
	2300-0200	7.8							
	0200-0500	8.0							
	0500-0800	8.8							
	0800-1100	8.4							

Appendix D

Site Record

Air Quality (H_2S) Monitoring Data Record Sheet

General Information	
Monitoring Station	A1
Date	26/11/19
Weather	Fine

Monitoring Results

Sample No	Time	Wind Speed	Wind Direction	Level(ppm)
Sample 1	Start: 1134	0.2m/s	N	0.002, 0.002, 0.002, 0.003, 0.002
	Stop: 1149			
Sample 2	Start: 1429	0.4m/s	N	0.002, 0.002, 0.002, 0.002, 0.002
	Stop: 1444			
Sample 3	Start: 1741	0.1m/s	NE	0.002, 0.002, 0.003, 0.002, 0.002
	Stop: 1756			
Sample 4	Start: [1] 0935	0.1m/s	NE	0.003, 0.007, 0.013, 0.003, 0.005
	Stop: [1] 0950			
Sample 5	Start: [2] 1130	/	/	0.002, 0.002, 0.002, 0.002, 0.002
	Stop: [2] 1145			
Sample 6	Start: 0240	/	/	0.002, 0.002, 0.002, 0.003, 0.003
	Stop: 0255			
Sample 7	Start: 0536	/	/	0.003, 0.002, 0.002, 0.002, 0.002
	Stop: 0551			
Sample 8	Start: 0830	/	/	0.001, 0.002, 0.003, 0.001, 0.002
	Stop: 0845			

Other Observations

Remarks:

[1] Sampling time of "Sample 4" shall read as
Start: 21:35
Stop: 21:50

[2] Sampling time of "Sample 5" shall read as
Start: 23:30
Stop: 23:45

	Name & Designation	Signature	Date
Recorded by:	Chan Ho Cheung		26/11/19
Checked by:	Vincent Lu		29/11/2019

FUGRO

Air Quality (H_2S) Monitoring Data Record Sheet

General Information	
Monitoring Station	A2
Date	26/11
Weather	Fine

Monitoring Results

Sample No	Time	Wind Speed	Wind Direction	Level(ppm)
Sample 1	Start: 1100	0.6m/s	N	0.002, 0.003, 0.002, 0.002, 0.002
	Stop: 1115			
Sample 2	Start: 1400	0.7m/s	N	0.002, 0.002, 0.002 0.003, 0.002
	Stop: 1415			
Sample 3	Start: 1705	/	/	0.002, 0.002, 0.002 0.002, 0.002
	Stop: 1720			
Sample 4	Start: [1] 0900	/	/	0.002, 0.002, 0.003 0.002, 0.001
	Stop: [1] 0915			
Sample 5	Start: [2] ~~2~~ 1100	/	/	0.002, 0.002, 0.002 0.002, 0.002
	Stop: [2] ~~1130~~ 1115			
Sample 6	Start: 0200	/	/	0.002, 0.002, 0.002 0.001, 0.001
	Stop: 0215			
Sample 7	Start: 0500	/	/	0.002, 0.001, 0.002 0.003, 0.002
	Stop: 0515			
Sample 8	Start: 0800	/	/	0.002, 0.002, 0.002 0.002, 0.002
	Stop: 0815			

Other Observations

Remarks:

[1] Sampling time of "Sample 4" shall read as
Start: 21:00
Stop: 21:15

[2] Sampling time of "Sample 5" shall read as
Start: 23:00
Stop: 23:15

	Name & Designation	Signature	Date
Recorded by:	Chan Ho Cheung		26/11/19
Checked by:	Vincent Lu		29/11/2019

FUGRO

Air Quality (H_2S) Monitoring Data Record Sheet

General Information	
Monitoring Station	A5
Date	26/11
Weather	Fine

Monitoring Results

Sample No	Time	Wind Speed	Wind Direction	Level(ppm)
Sample 1	Start: 1158 Stop: 1213	0.0m/s	—	0.004, 0.002, 0.002, 0.003, 0.002.
Sample 2	Start: 1458 Stop: 1513	0.0m/s	—	0.004, 0.003, 0.002 0.002, 0.002
Sample 3	Start: 1810 Stop: 1825	0.1m/s	—	0.003, 0.002, 0.002, 0.003 0.003
Sample 4	Start: [1] 0958 Stop: [1] 1013	—	—	0.003, 0.003, 0.002, 0.002 0.002
Sample 5	Start: [2] 1155 Stop: [2] 0010	—	—	0.003, 0.003, 0.002 0.002, 0.002
Sample 6	Start: 0307 Stop: 0322	0.3m/s	NE	0.002, 0.003, 0.002 0.002, 0.002
Sample 7	Start: 0559 Stop: 0614	—	—	0.002, 0.002, 0.003 0.002, 0.003
Sample 8	Start: 0855 Stop: 0910	—	—	0.003, 0.002, 0.002 0.003, 0.002

Other Observations

Remarks:
[1] Sampling time of "Sample 4" shall read as
Start: 21:58
Stop: 22:13

[2] Sampling time of "Sample 5" shall refer to the logging time at Data Logger Record from 23:53 to 00:05

	Name & Designation	Signature	Date
Recorded by:	Chan Ho Chong		26/11/19
Checked by:	Vincent Lu		29/11/2019

FUGRO

Air Quality (H_2S) Monitoring Data Record Sheet

General Information	
Monitoring Station	SPS
Date	26/11
Weather	Fine

Monitoring Results

Sample No	Time	Wind Speed	Wind Direction	Level(ppm)
Sample 1	Start: ~~12~~ 1217	0.0m/s	~~NA~~ /	0.008, 0.011, 0.003
	Stop: 1232			0.010, 0.002
Sample 2	Start: 1525	0.0m/s	/	0.003, 0.003, 0.012
	Stop: 1540			0.009, 0.009
Sample 3	Start: 1837	0.0m/s	/	0.003, 0.011, 0.009
	Stop: 1852			0.003, 0.002
Sample 4	Start: [1] 1020	0.0m/s	/	0.008, 0.008, 0.008
	Stop: [1] 1035			0.007, 0.008
Sample 5	Start: 0017	/	/	0.008, 0.007, 0.007
	Stop: 0032			0.009, 0.008
Sample 6	Start: 0340	/	/	0.008, 0.010, 0.008
	Stop: 0355			0.007, 0.007
Sample 7	Start: 0625	/	/	0.009, 0.011, 0.008
	Stop: 0640			0.008, 0.008
Sample 8	Start: 0917	/	/	0.009, 0.008, 0.008
	Stop: 0932			0.007, 0.010

Other Observations

Remarks:

[1] Sampling time of "Sample 4" shall read as
Start: 22:20
Stop: 22:35

	Name & Designation	Signature	Date
Recorded by:	Chan Ho Cheng		26/11/19
Checked by:	Vincent Lu		29/11/2019

FUGRO

Appendix E

Data Logger Record

Site Name:	Tuen Mun Area 54 SPS	**Sample Location:**	Inlet
Address:	Tuen Mun Area 54 SPS	**Technician:**	
		Instrument:	631-1, 631-X, SN 2967
		Comment:	
		Date/Time:	十一月-29-2018 10:08am
		Alarm Setpoint:	**0 (ppm)**

	DATE/TIME		RESULT (ppm)	
1	十一月-26-2019	11:00:08am	0.002	
2	十一月-26-2019	11:03:08am	0.003	
3	十一月-26-2019	11:06:08am	0.002	
4	十一月-26-2019	11:09:08am	0.002	
5	十一月-26-2019	11:12:08am	0.002	
6	十一月-26-2019	11:34:10am	/III	End Of Session
7	十一月-26-2019	11:34:10am	0.002	
8	十一月-26-2019	11:37:10am	0.002	
9	十一月-26-2019	11:40:10am	0.002	
10	十一月-26-2019	11:43:10am	0.003	
11	十一月-26-2019	11:47:10am	0.002	
12	十一月-26-2019	11:58:16am	/III	End Of Session
13	十一月-26-2019	11:58:16am	0.004	
14	十一月-26-2019	12:01:16pm	0.002	
15	十一月-26-2019	12:04:16pm	0.002	
16	十一月-26-2019	12:07:16pm	0.003	
17	十一月-26-2019	12:10:16pm	0.002	
18	十一月-26-2019	12:17:51pm	/III	End Of Session
19	十一月-26-2019	12:17:51pm	0.008	
20	十一月-26-2019	12:20:51pm	0.011	
21	十一月-26-2019	12:23:51pm	0.003	
22	十一月-26-2019	12:26:51pm	0.010	
23	十一月-26-2019	12:29:51pm	0.002	
24	十一月-26-2019	02:00:02pm	/III	End Of Session
25	十一月-26-2019	02:00:02pm	0.002	
24	十一月-26-2019	02:03:02pm	0.002	
25	十一月-26-2019	02:06:02pm	0.002	
28	十一月-26-2019	02:09:02pm	0.003	
29	十一月-26-2019	02:12:02pm	0.002	
30	十一月-26-2019	02:29:30pm	/III	End Of Session
31	十一月-26-2019	02:29:30pm	0.002	
32	十一月-26-2019	02:32:30pm	0.002	
33	十一月-26-2019	02:35:30pm	0.002	
34	十一月-26-2019	02:38:30pm	0.002	
35	十一月-26-2019	02:41:30pm	0.002	
36	十一月-26-2019	02:58:44pm	/III	End Of Session
37	十一月-26-2019	02:58:44pm	0.004	
38	十一月-26-2019	03:01:44pm	0.003	
39	十一月-26-2019	03:04:44pm	0.002	
40	十一月-26-2019	03:07:44pm	0.002	
41	十一月-26-2019	03:10:44pm	0.002	
42	十一月-26-2019	03:25:23pm	/III	End Of Session
43	十一月-26-2019	03:25:23pm	0.003	
44	十一月-26-2019	03:28:23pm	0.003	
45	十一月-26-2019	03:31:23pm	0.012	

Site Name:	Tuen Mun Area 54 SPS	**Sample Location:**	Inlet
Address:	Tuen Mun Area 54 SPS	**Technician:**	
		Instrument:	631-1, 631-X, SN 2967
		Comment:	
		Date/Time:	十一月-29-2018 10:08am
		Alarm Setpoint:	**0 (ppm)**

	DATE/TIME		RESULT (ppm)	
46	十一月-26-2019	03:34:23pm	0.009	
47	十一月-26-2019	03:37:23pm	0.009	
48	十一月-26-2019	05:05:02pm	/III	End Of Session
49	十一月-26-2019	05:05:02pm	0.002	
50	十一月-26-2019	05:08:02pm	0.002	
51	十一月-26-2019	05:11:02pm	0.002	
52	十一月-26-2019	05:14:02pm	0.002	
53	十一月-26-2019	05:17:02pm	0.002	
54	十一月-26-2019	05:41:34pm	/III	End Of Session
55	十一月-26-2019	05:41:34pm	0.002	
56	十一月-26-2019	05:44:34pm	0.002	
57	十一月-26-2019	05:47:34pm	0.003	
58	十一月-26-2019	05:50:34pm	0.002	
59	十一月-26-2019	05:53:34pm	0.002	
60	十一月-26-2019	06:10:59pm	/III	End Of Session
61	十一月-26-2019	06:10:59pm	0.003	
62	十一月-26-2019	06:13:59pm	0.002	
63	十一月-26-2019	06:16:59pm	0.002	
64	十一月-26-2019	06:19:59pm	0.003	
65	十一月-26-2019	06:22:59pm	0.003	
66	十一月-26-2019	06:37:22pm	/III	End Of Session
67	十一月-26-2019	06:37:22pm	0.003	
68	十一月-26-2019	06:40:22pm	0.011	
69	十一月-26-2019	06:43:22pm	0.009	
70	十一月-26-2019	06:46:22pm	0.003	
71	十一月-26-2019	06:49:22pm	0.002	
72	十一月-26-2019	09:00:03pm	/III	End Of Session
73	十一月-26-2019	09:00:03pm	0.002	
74	十一月-26-2019	09:03:03pm	0.002	
75	十一月-26-2019	09:06:03pm	0.003	
76	十一月-26-2019	09:09:03pm	0.002	
77	十一月-26-2019	09:12:03pm	0.001	
78	十一月-26-2019	09:35:17pm	/III	End Of Session
79	十一月-26-2019	09:35:17pm	0.003	
80	十一月-26-2019	09:38:17pm	0.007	
81	十一月-26-2019	09:41:17pm	0.013	
82	十一月-26-2019	09:44:17pm	0.003	
83	十一月-26-2019	09:47:17pm	0.005	
84	十一月-26-2019	09:58:38pm	/III	End Of Session
85	十一月-26-2019	09:58:38pm	0.003	
86	十一月-26-2019	10:01:38pm	0.003	
87	十一月-26-2019	10:04:38pm	0.002	
88	十一月-26-2019	10:07:38pm	0.002	
89	十一月-26-2019	10:10:38pm	0.002	
90	十一月-26-2019	10:20:41pm	/III	End Of Session
91	十一月-26-2019	10:20:41pm	0.008	

Site Name:	Tuen Mun Area 54 SPS	**Sample Location:**	Inlet
Address:	Tuen Mun Area 54 SPS	**Technician:**	
		Instrument:	631-1, 631-X, SN 2967
		Comment:	
		Date/Time:	十一月-29-2018 10:08am
		Alarm Setpoint:	**0 (ppm)**

	DATE/TIME		RESULT (ppm)	
92	十一月-26-2019	10:23:41pm	0.008	
93	十一月-26-2019	10:26:41pm	0.008	
94	十一月-26-2019	10:29:41pm	0.007	
95	十一月-26-2019	10:32:41pm	0.008	
96	十一月-26-2019	11:00:09pm	/III	End Of Session
97	十一月-26-2019	11:00:09pm	0.002	
98	十一月-26-2019	11:03:09pm	0.002	
99	十一月-26-2019	11:06:09pm	0.002	
100	十一月-26-2019	11:09:09pm	0.002	
101	十一月-26-2019	11:12:09pm	0.002	
102	十一月-26-2019	11:30:51pm	/III	End Of Session
103	十一月-26-2019	11:30:51pm	0.002	
104	十一月-26-2019	11:33:51pm	0.002	
105	十一月-26-2019	11:36:51pm	0.002	
106	十一月-26-2019	11:39:51pm	0.002	
107	十一月-26-2019	11:42:51pm	0.002	
108	十一月-26-2019	11:53:22pm	/III	End Of Session
109	十一月-26-2019	11:53:22pm	0.003	
110	十一月-26-2019	11:56:22pm	0.003	
111	十一月-26-2019	11:59:22pm	0.002	
112	十一月-27-2019	00:02:22am	0.002	
113	十一月-27-2019	00:05:22am	0.002	
114	十一月-27-2019	00:17:51am	/III	End Of Session
115	十一月-27-2019	00:17:51am	0.008	
116	十一月-27-2019	00:20:51am	0.007	
117	十一月-27-2019	00:23:51am	0.007	
118	十一月-27-2019	00:26:51am	0.009	
119	十一月-27-2019	00:29:51am	0.008	
120	十一月-27-2019	02:00:36am	/III	End Of Session
121	十一月-27-2019	02:00:36am	0.002	
122	十一月-27-2019	02:03:36am	0.002	
123	十一月-27-2019	02:06:36am	0.002	
124	十一月-27-2019	02:09:36am	0.001	
125	十一月-27-2019	02:12:36am	0.001	
126	十一月-27-2019	02:40:53am	/III	End Of Session
127	十一月-27-2019	02:40:53am	0.002	
128	十一月-27-2019	02:43:53am	0.002	
129	十一月-27-2019	02:46:53am	0.002	
130	十一月-27-2019	02:49:53am	0.003	
131	十一月-27-2019	02:52:53am	0.003	
132	十一月-27-2019	03:07:11am	/III	End Of Session
133	十一月-27-2019	03:07:11am	0.002	
134	十一月-27-2019	03:10:11am	0.003	
135	十一月-27-2019	03:13:11am	0.002	
136	十一月-27-2019	03:17:11am	0.002	
137	十一月-27-2019	03:20:11am	0.002	

Site Name:	Tuen Mun Area 54 SPS	**Sample Location:**	Inlet
Address:	Tuen Mun Area 54 SPS	**Technician:**	
		Instrument:	631-1, 631-X, SN 2967
		Comment:	
		Date/Time:	十一月-29-2018 10:08am
		Alarm Setpoint:	**0 (ppm)**

	DATE/TIME		RESULT (ppm)	
92	十一月-26-2019	10:23:41pm	0.008	
93	十一月-26-2019	10:26:41pm	0.008	
94	十一月-26-2019	10:29:41pm	0.007	
95	十一月-26-2019	10:32:41pm	0.008	
96	十一月-26-2019	11:00:09pm	/III	End Of Session
97	十一月-26-2019	11:00:09pm	0.002	
98	十一月-26-2019	11:03:09pm	0.002	
99	十一月-26-2019	11:06:09pm	0.002	
100	十一月-26-2019	11:09:09pm	0.002	
101	十一月-26-2019	11:12:09pm	0.002	
102	十一月-26-2019	11:30:51pm	/III	End Of Session
103	十一月-26-2019	11:30:51pm	0.002	
104	十一月-26-2019	11:33:51pm	0.002	
105	十一月-26-2019	11:36:51pm	0.002	
106	十一月-26-2019	11:39:51pm	0.002	
107	十一月-26-2019	11:42:51pm	0.002	
108	十一月-26-2019	11:53:22pm	/III	End Of Session
109	十一月-26-2019	11:53:22pm	0.003	
110	十一月-26-2019	11:56:22pm	0.003	
111	十一月-26-2019	11:59:22pm	0.002	
112	十一月-27-2019	00:02:22am	0.002	
113	十一月-27-2019	00:05:22am	0.002	
114	十一月-27-2019	00:17:51am	/III	End Of Session
115	十一月-27-2019	00:17:51am	0.008	
116	十一月-27-2019	00:20:51am	0.007	
117	十一月-27-2019	00:23:51am	0.007	
118	十一月-27-2019	00:26:51am	0.009	
119	十一月-27-2019	00:29:51am	0.008	
120	十一月-27-2019	02:00:36am	/III	End Of Session
121	十一月-27-2019	02:00:36am	0.002	
122	十一月-27-2019	02:03:36am	0.002	
123	十一月-27-2019	02:06:36am	0.002	
124	十一月-27-2019	02:09:36am	0.001	
125	十一月-27-2019	02:12:36am	0.001	
126	十一月-27-2019	02:40:53am	/III	End Of Session
127	十一月-27-2019	02:40:53am	0.002	
128	十一月-27-2019	02:43:53am	0.002	
129	十一月-27-2019	02:46:53am	0.002	
130	十一月-27-2019	02:49:53am	0.003	
131	十一月-27-2019	02:52:53am	0.003	
132	十一月-27-2019	03:07:11am	/III	End Of Session
133	十一月-27-2019	03:07:11am	0.002	
134	十一月-27-2019	03:10:11am	0.003	
135	十一月-27-2019	03:13:11am	0.002	
136	十一月-27-2019	03:17:11am	0.002	
137	十一月-27-2019	03:20:11am	0.002	

Site Name:	Tuen Mun Area 54 SPS	**Sample Location:**	Inlet
Address:	Tuen Mun Area 54 SPS	**Technician:**	
		Instrument:	631-1, 631-X, SN 2967
		Comment:	
		Date/Time:	十一月-29-2018 10:08am
		Alarm Setpoint:	**0 (ppm)**

	DATE/TIME		RESULT (ppm)	
138	十一月-27-2019	03:40:44am	/III	End Of Session
139	十一月-27-2019	03:40:44am	0.008	
140	十一月-27-2019	03:43:44am	0.010	
141	十一月-27-2019	03:46:44am	0.008	
142	十一月-27-2019	03:49:44am	0.007	
143	十一月-27-2019	03:52:44am	0.007	
144	十一月-27-2019	05:00:06am	/III	End Of Session
145	十一月-27-2019	05:00:06am	0.002	
146	十一月-27-2019	05:03:06am	0.001	
147	十一月-27-2019	05:06:06am	0.002	
148	十一月-27-2019	05:09:06am	0.003	
149	十一月-27-2019	05:12:06am	0.002	
150	十一月-27-2019	05:36:45am	/III	End Of Session
151	十一月-27-2019	05:36:45am	0.003	
152	十一月-27-2019	05:39:45am	0.002	
153	十一月-27-2019	05:42:45am	0.002	
154	十一月-27-2019	05:45:45am	0.002	
155	十一月-27-2019	05:48:45am	0.002	
156	十一月-27-2019	05:59:29am	/III	End Of Session
157	十一月-27-2019	05:59:29am	0.002	
158	十一月-27-2019	06:02:29am	0.002	
159	十一月-27-2019	06:05:29am	0.003	
160	十一月-27-2019	06:08:29am	0.002	
161	十一月-27-2019	06:11:29am	0.003	
162	十一月-27-2019	06:25:37am	/III	End Of Session
163	十一月-27-2019	06:25:37am	0.009	
164	十一月-27-2019	06:28:37am	0.011	
165	十一月-27-2019	06:31:37am	0.008	
166	十一月-27-2019	06:34:37am	0.008	
167	十一月-27-2019	06:37:37am	0.008	
168	十一月-27-2019	08:00:04am	/III	End Of Session
169	十一月-27-2019	08:00:04am	0.002	
170	十一月-27-2019	08:03:04am	0.002	
171	十一月-27-2019	08:06:04am	0.002	
172	十一月-27-2019	08:09:04am	0.002	
173	十一月-27-2019	08:12:04am	0.002	
174	十一月-27-2019	08:30:17am	/III	End Of Session
175	十一月-27-2019	08:30:17am	0.001	
176	十一月-27-2019	08:33:17am	0.002	
177	十一月-27-2019	08:36:17am	0.003	
178	十一月-27-2019	08:39:17am	0.001	
179	十一月-27-2019	08:42:17am	0.002	
180	十一月-27-2019	08:55:11am	/III	End Of Session
181	十一月-27-2019	08:55:11am	0.003	
182	十一月-27-2019	08:58:11am	0.002	
183	十一月-27-2019	09:01:11am	0.002	

Site Name:	Tuen Mun Area 54 SPS	**Sample Location:**	Inlet
Address:	Tuen Mun Area 54 SPS	**Technician:**	
		Instrument:	631-1, 631-X, SN 2967
		Comment:	
		Date/Time:	十一月-29-2018 10:08am
		Alarm Setpoint:	**0 (ppm)**

	DATE/TIME		RESULT (ppm)	
184	十一月-27-2019	09:04:11am	0.003	
185	十一月-27-2019	09:07:11am	0.002	
186	十一月-27-2019	09:17:55am	/III	End Of Session
187	十一月-27-2019	09:17:55am	0.009	
188	十一月-27-2019	09:20:55am	0.008	
189	十一月-27-2019	09:23:55am	0.008	
190	十一月-27-2019	09:26:55am	0.007	
191	十一月-27-2019	09:29:55am	0.010	

Readings:	160
Minimum:	0.001
Maximum:	0.013
Average:	0.0037
SD:	0.0028

Appendix F

Calibration Certificates

BROOKFIELD AMETEK

3375 N. Delaware Street, Chandler, AZ 85225
800.528.7411 | (f) 602.281.1745 | azic.com

Certification of Instrument Calibration

Guyline (Asia) Ltd
Rm 1611, Eastern Harbour Centre
Quarry Bay,

RMA # 2634783

This is to certify that the Jerome **X631 0003** Gold Film Hydrogen Sulfide Analyzer, Serial Number **2967**, with Sensor Number **16-4-13-V2DS**, was calibrated with standard units traceable to NIST.

Calibration Status as Received: **Functionally Unable to Check**

		Actual		Calibration Gas		Allowable Range
Incoming:	Range 1		ppm H2S		ppm H2S	+/- 6%
	RSD %					<5%
Outgoing:	Range 1	0.501	ppm H2S	0.500	ppm H2S	+/- 6%
	RSD %	1.51				<5%

Calibration Status as Left: **In Calibration**

Estimated Uncertainty of Calibration System: 2.8%

Calibration Date: 17-Jan-2019 Recalibration Date: 16-Jan-2020

Temperature °F: 72.50 % Relative Humidity: 38.50

Approved By: Cheryl Hradek Date Approved: 18-Jan-2019
Title: Cheryl Hradek - Quality Control

Equipment Used:

H2S Calibration Standard: CC-230020 **NIST#:** 1417575
Calibration Date: 30-May-2017 **Calibration Date Due:** 31-May-2020

Mass Flow Controller B: 124604 **NIST#:** 215457
Calibration Date: 13-Dec-2018 **Calibration Date Due:** 13-Dec-2019

Mass Flow Controller D: 124602 **NIST#:** 215454
Calibration Date: 13-Dec-2018 **Calibration Date Due:** 13-Dec-2019

Digital Multimeter: 74620534 **NIST#:** 7003079
Calibration Date: 16-Feb-2018 **Calibration Date Due:** 16-Feb-2019

Flowmeter: US04I26032 **NIST#:** 1813; 1817; 1796
Calibration Date: 17-Oct-2018 **Calibration Date Due:** 18-Oct-2019

Calibration Procedure Used: 730-0032

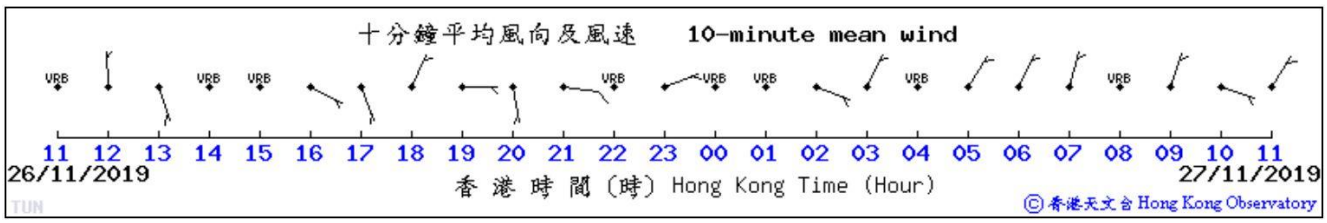
AMETEK Brookfield certifies that the above listed instrument meets or exceeds all published specifications and has been calibrated using standards whose accuracy are traceable to the NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY within the limitations of the Institute's calibration services, or have been derived from accepted values of natural physical constants, or have been derived by the ratio type of self-calibration techniques.
Disclaimer: Any unauthorized adjustments, removal or breaking of QC seals, or other customer modifications on your Jerome Analyzer WILL VOID this factory calibration. Because any of the above acts could affect the calibration and readings of the instrument, their certification will no longer be valid and, further, AMETEK Brookfield WILL NOT be responsible for any liabilities created as a result of using the instrument after such adjustments, seal removal, or modifications.
As long as a functional test is within range, according to the procedure outlined in the Operator's Manual, the instrument is performing correctly.

This document shall not be reproduced, except in full, without the written approval of AMETEK Brookfield.

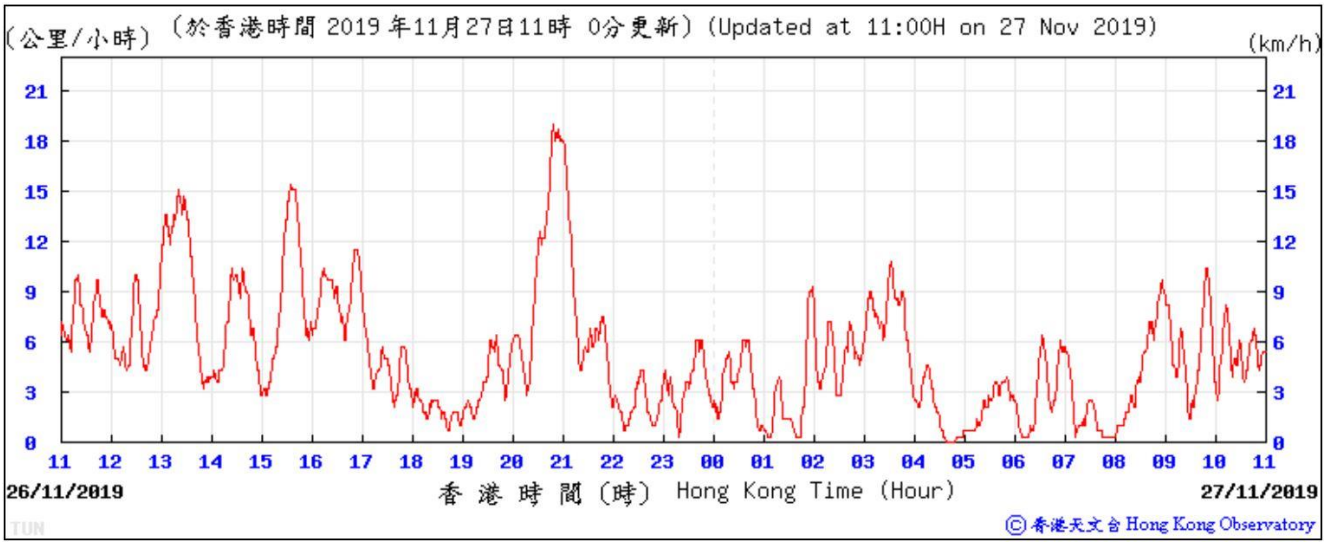
Appendix G

Meteorological Conditions

10-Minute Mean Wind Direction at the nearest Hong Kong Observatory's Tuen Mun Weather Station:



10-Minute Mean Wind Speed at the nearest Hong Kong Observatory's Tuen Mun Weather Station:



Meteorological conditions during the first operation phase odour impact monitoring

Date	Time	Weather Parameters		
		Temperature	Wind Direction	Wind Speed (km/hour)
26 November 2019	1100	23	--	7.0
	1200	23	N	7.0
	1300	24	SE	9.0
	1400	23	--	4.0
	1500	24	--	3.0
	1600	23	SE	7.0
	1700	23	SE	7.0
	1800	23	NE	2.0
	1900	22	E	1.0
	2000	22	SE	5.5
	2100	22	SE	18.0
	2200	22	--	2.5
	2300	22	NE	3.0
	2400	23	--	2.5
27 November 2019	0100	23	--	1.0
	0200	22	SE	8.5
	0300	22	NE	6.0
	0400	22	--	2.5
	0500	21	NE	0.5
	0600	21	--	2.5
	0700	21	--	5.5
	0800	21	NE	0.5
	0900	21	SE	8.0
	1000	22	NE	3.0

PRESS WEATHER NO. 082 - HOURLY READINGS

****

HOURLY READINGS

AT 11 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 71 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 2. THE INTENSITY OF UV RADIATION WAS LOW.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	22 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	22 DEGREES;
LAU FAU SHAN	22 DEGREES;
TAI PO	21 DEGREES;
SHA TIN	21 DEGREES;
TUEN MUN	23 DEGREES;
TSEUNG KWAN O	22 DEGREES;
SAI KUNG	21 DEGREES;
CHEUNG CHAU	22 DEGREES;
CHEK LAP KOK	22 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	22 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	22 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	22 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	22 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	21 DEGREES;
YUEN LONG PARK	22 DEGREES;
TAI MEI TUK	23 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 11:02 HKT ON 26.11.2019

PRESS WEATHER NO. 094 - HOURLY READINGS
****

HOURLY READINGS

AT NOON AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 71 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 3. THE INTENSITY OF UV RADIATION WAS MODERATE.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	22 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	25 DEGREES;
LAU FAU SHAN	24 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	23 DEGREES;
TUEN MUN	23 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	22 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	23 DEGREES;
SHEK KONG	23 DEGREES;
TSUEN WAN HO KOON	23 DEGREES;
TSUEN WAN SHING MUN VALLEY	23 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	22 DEGREES;
KOWLOON CITY	22 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	22 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	23 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	24 DEGREES;
TAI MEI TUK	24 DEGREES.

A TRACE OF RAINFALL WAS RECORDED AT THE HONG KONG OBSERVATORY BETWEEN MIDNIGHT LAST NIGHT AND MIDDAY TODAY.

DISPATCHED BY HONG KONG OBSERVATORY AT 12:02 HKT ON 26.11.2019

PRESS WEATHER NO. 102 - HOURLY READINGS
****
HOURLY READINGS

AT 1 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 23 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 69 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 3. THE INTENSITY OF UV RADIATION WAS MODERATE.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	22 DEGREES;
WONG CHUK HANG	23 DEGREES;
TA KWU LING	25 DEGREES;
LAU FAU SHAN	25 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	23 DEGREES;
TUEN MUN	24 DEGREES;
TSEUNG KWAN O	23 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	24 DEGREES;
CHEK LAP KOK	24 DEGREES;
TSING YI	23 DEGREES;
SHEK KONG	25 DEGREES;
TSUEN WAN HO KOON	22 DEGREES;
TSUEN WAN SHING MUN VALLEY	23 DEGREES;
HONG KONG PARK	23 DEGREES;
SHAU KEI WAN	22 DEGREES;
KOWLOON CITY	22 DEGREES;
HAPPY VALLEY	23 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	23 DEGREES;
KWUN TONG	22 DEGREES;
SHAM SHUI PO	23 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	26 DEGREES;
TAI MEI TUK	24 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 13:02 HKT ON 26.11.2019

PRESS WEATHER NO. 108 - HOURLY READINGS
****

HOURLY READINGS

AT 2 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 23 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 68 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 3. THE INTENSITY OF UV RADIATION WAS MODERATE.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	23 DEGREES;
WONG CHUK HANG	23 DEGREES;
TA KWU LING	25 DEGREES;
LAU FAU SHAN	27 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	23 DEGREES;
TUEN MUN	23 DEGREES;
TSEUNG KWAN O	22 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	24 DEGREES;
CHEK LAP KOK	25 DEGREES;
TSING YI	23 DEGREES;
SHEK KONG	23 DEGREES;
TSUEN WAN HO KOON	23 DEGREES;
TSUEN WAN SHING MUN VALLEY	23 DEGREES;
HONG KONG PARK	23 DEGREES;
SHAU KEI WAN	22 DEGREES;
KOWLOON CITY	23 DEGREES;
HAPPY VALLEY	23 DEGREES;
WONG TAI SIN	23 DEGREES;
STANLEY	22 DEGREES;
KWUN TONG	22 DEGREES;
SHAM SHUI PO	24 DEGREES;
KAI TAK RUNWAY PARK	23 DEGREES;
YUEN LONG PARK	25 DEGREES;
TAI MEI TUK	23 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 14:02 HKT ON 26.11.2019

PRESS WEATHER NO. 112 - HOURLY READINGS
****

HOURLY READINGS

AT 3 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 23 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 72 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 2. THE INTENSITY OF UV RADIATION WAS LOW.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	22 DEGREES;
WONG CHUK HANG	23 DEGREES;
TA KWU LING	23 DEGREES;
LAU FAU SHAN	26 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	23 DEGREES;
TUEN MUN	24 DEGREES;
TSEUNG KWAN O	22 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	23 DEGREES;
CHEK LAP KOK	24 DEGREES;
TSING YI	23 DEGREES;
SHEK KONG	23 DEGREES;
TSUEN WAN HO KOON	22 DEGREES;
TSUEN WAN SHING MUN VALLEY	23 DEGREES;
HONG KONG PARK	// DEGREES;
SHAU KEI WAN	22 DEGREES;
KOWLOON CITY	23 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	23 DEGREES;
STANLEY	22 DEGREES;
KWUN TONG	22 DEGREES;
SHAM SHUI PO	24 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	24 DEGREES;
TAI MEI TUK	24 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 15:04 HKT ON 26.11.2019

PRESS WEATHER NO. 116 - HOURLY READINGS
****
HOURLY READINGS

AT 4 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 73 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 0.8. THE INTENSITY OF UV RADIATION WAS LOW.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	22 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	23 DEGREES;
LAU FAU SHAN	25 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	23 DEGREES;
TSEUNG KWAN O	22 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	22 DEGREES;
CHEK LAP KOK	24 DEGREES;
TSING YI	23 DEGREES;
SHEK KONG	23 DEGREES;
TSUEN WAN HO KOON	22 DEGREES;
TSUEN WAN SHING MUN VALLEY	22 DEGREES;
HONG KONG PARK	// DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	22 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	22 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	23 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	23 DEGREES;
TAI MEI TUK	23 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 16:02 HKT ON 26.11.2019

PRESS WEATHER NO. 130 - HOURLY READINGS

****

HOURLY READINGS

AT 5 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 75 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 0.2. THE INTENSITY OF UV RADIATION WAS LOW.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	22 DEGREES;
LAU FAU SHAN	23 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	23 DEGREES;
TSEUNG KWAN O	22 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	23 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	22 DEGREES;
HONG KONG PARK	// DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	23 DEGREES;
TAI MEI TUK	22 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 17:02 HKT ON 26.11.2019

PRESS WEATHER NO. 136 - HOURLY READINGS
****
HOURLY READINGS

AT 6 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 78 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 0.0. THE INTENSITY OF UV RADIATION WAS LOW.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	22 DEGREES;
LAU FAU SHAN	22 DEGREES;
TAI PO	21 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	23 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	22 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	23 DEGREES;
TAI MEI TUK	21 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 18:02 HKT ON 26.11.2019

PRESS WEATHER NO. 146 - HOURLY READINGS

****

HOURLY READINGS

AT 7 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 78 PER CENT.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	22 DEGREES;
LAU FAU SHAN	21 DEGREES;
TAI PO	21 DEGREES;
SHA TIN	21 DEGREES;
TUEN MUN	22 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	22 DEGREES;
TSUEN WAN HO KOON	20 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	22 DEGREES;
TAI MEI TUK	21 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 19:02 HKT ON 26.11.2019

PRESS WEATHER NO. 152 - HOURLY READINGS

****

HOURLY READINGS

AT 8 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 78 PER CENT.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	22 DEGREES;
LAU FAU SHAN	21 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	21 DEGREES;
TUEN MUN	22 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	22 DEGREES;
TSUEN WAN HO KOON	20 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	22 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	22 DEGREES;
TAI MEI TUK	21 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 20:02 HKT ON 26.11.2019

PRESS WEATHER NO. 160 - HOURLY READINGS

****

HOURLY READINGS

AT 9 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 80 PER CENT.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	21 DEGREES;
LAU FAU SHAN	21 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	22 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	21 DEGREES;
TSUEN WAN HO KOON	20 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	22 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	21 DEGREES;
TAI MEI TUK	21 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 21:02 HKT ON 26.11.2019

PRESS WEATHER NO. 166 - HOURLY READINGS

****

HOURLY READINGS

AT 10 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 80 PER CENT.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	21 DEGREES;
LAU FAU SHAN	21 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	22 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	22 DEGREES;
TSUEN WAN HO KOON	20 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	22 DEGREES;
TAI MEI TUK	21 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 22:02 HKT ON 26.11.2019

PRESS WEATHER NO. 172 - HOURLY READINGS
****
HOURLY READINGS

AT 11 P.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE
WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 79 PER

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	21 DEGREES;
LAU FAU SHAN	21 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	22 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	22 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	21 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	22 DEGREES;
TAI MEI TUK	21 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 23:02 HKT ON 26.11.2019

PRESS WEATHER NO. 004 - HOURLY READINGS

****

HOURLY READINGS

AT MIDNIGHT AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 79 PER CENT.

STRONG WINDS ARE EXPECTED FROM THE EAST. THE PUBLIC SHOULD BEWARE OF THE POSSIBLE DANGER BROUGHT BY ROUGH SEAS.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	22 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	22 DEGREES;
LAU FAU SHAN	22 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	23 DEGREES;
TSEUNG KWAN O	22 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	22 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	23 DEGREES;
SHEK KONG	23 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	22 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	22 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	22 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	23 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	23 DEGREES;
TAI MEI TUK	22 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 00:02 HKT ON 26.11.2019

PRESS WEATHER NO. 010 - HOURLY READINGS

****

HOURLY READINGS

AT 1 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 80 PER CENT.

STRONG WINDS ARE EXPECTED FROM THE EAST. THE PUBLIC SHOULD BEWARE OF THE POSSIBLE DANGER BROUGHT BY ROUGH SEAS.

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	22 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	21 DEGREES;
LAU FAU SHAN	22 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	23 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	22 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	22 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	22 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	23 DEGREES;
TAI MEI TUK	22 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 01:02 HKT ON 26.11.2019

PRESS WEATHER NO. 016 - HOURLY READINGS

****

HOURLY READINGS

AT 2 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 80 PER CENT.

STRONG WINDS ARE EXPECTED FROM THE EAST. THE PUBLIC SHOULD BEWARE OF THE POSSIBLE DANGER BROUGHT BY ROUGH SEAS.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	21 DEGREES;
LAU FAU SHAN	22 DEGREES;
TAI PO	22 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	22 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	22 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	22 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	22 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	22 DEGREES;
TAI MEI TUK	22 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 02:02 HKT ON 26.11.2019

PRESS WEATHER NO. 020 - HOURLY READINGS

****

HOURLY READINGS

AT 3 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 80 PER CENT.

STRONG WINDS ARE EXPECTED FROM THE EAST. THE PUBLIC SHOULD BEWARE OF THE POSSIBLE DANGER BROUGHT BY ROUGH SEAS

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	22 DEGREES;
TA KWU LING	20 DEGREES;
LAU FAU SHAN	21 DEGREES;
TAI PO	21 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	22 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	23 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	21 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	22 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	21 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	21 DEGREES;
TAI MEI TUK	20 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 03:02 HKT ON 26.11.2019

PRESS WEATHER NO. 026 - HOURLY READINGS
****
HOURLY READINGS

AT 4 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 81 PER CENT.

STRONG WINDS ARE EXPECTED FROM THE EAST. THE PUBLIC SHOULD BEWARE OF THE POSSIBLE DANGER BROUGHT BY ROUGH SEAS.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	21 DEGREES;
TA KWU LING	20 DEGREES;
LAU FAU SHAN	21 DEGREES;
TAI PO	21 DEGREES;
SHA TIN	22 DEGREES;
TUEN MUN	22 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	22 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	22 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	21 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	21 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	21 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	21 DEGREES;
TAI MEI TUK	20 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 04:02 HKT ON 26.11.2019

PRESS WEATHER NO. 032 - HOURLY READINGS

****

HOURLY READINGS

AT 5 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 22 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 81 PER CENT.

STRONG WINDS ARE EXPECTED FROM THE EAST. THE PUBLIC SHOULD BEWARE OF THE POSSIBLE DANGER BROUGHT BY ROUGH SEAS.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	21 DEGREES;
TA KWU LING	19 DEGREES;
LAU FAU SHAN	20 DEGREES;
TAI PO	21 DEGREES;
SHA TIN	21 DEGREES;
TUEN MUN	21 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	21 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	22 DEGREES;
TSING YI	21 DEGREES;
SHEK KONG	20 DEGREES;
TSUEN WAN HO KOON	20 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	21 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	21 DEGREES;
WONG TAI SIN	21 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	21 DEGREES;
SHAM SHUI PO	21 DEGREES;
KAI TAK RUNWAY PARK	22 DEGREES;
YUEN LONG PARK	21 DEGREES;
TAI MEI TUK	20 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 05:02 HKT ON 26.11.2019

PRESS WEATHER NO. 042 - HOURLY READINGS
****
HOURLY READINGS

AT 6 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 21 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 77 PER CENT.

STRONG WINDS ARE EXPECTED FROM THE EAST. THE PUBLIC SHOULD BEWARE OF THE POSSIBLE DANGER BROUGHT BY ROUGH SEAS.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	21 DEGREES;
TA KWU LING	19 DEGREES;
LAU FAU SHAN	20 DEGREES;
TAI PO	21 DEGREES;
SHA TIN	21 DEGREES;
TUEN MUN	21 DEGREES;
TSEUNG KWAN O	20 DEGREES;
SAI KUNG	20 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	22 DEGREES;
TSING YI	21 DEGREES;
SHEK KONG	20 DEGREES;
TSUEN WAN HO KOON	20 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	21 DEGREES;
SHAU KEI WAN	20 DEGREES;
KOWLOON CITY	20 DEGREES;
HAPPY VALLEY	21 DEGREES;
WONG TAI SIN	21 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	20 DEGREES;
SHAM SHUI PO	21 DEGREES;
KAI TAK RUNWAY PARK	21 DEGREES;
YUEN LONG PARK	20 DEGREES;
TAI MEI TUK	19 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 06:02 HKT ON 26.11.2019

PRESS WEATHER NO. 052 - HOURLY READINGS
****
HOURLY READINGS

AT 7 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 21 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 75 PER CENT.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	21 DEGREES;
TA KWU LING	19 DEGREES;
LAU FAU SHAN	19 DEGREES;
TAI PO	20 DEGREES;
SHA TIN	20 DEGREES;
TUEN MUN	21 DEGREES;
TSEUNG KWAN O	20 DEGREES;
SAI KUNG	20 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	21 DEGREES;
TSING YI	21 DEGREES;
SHEK KONG	19 DEGREES;
TSUEN WAN HO KOON	20 DEGREES;
TSUEN WAN SHING MUN VALLEY	20 DEGREES;
HONG KONG PARK	21 DEGREES;
SHAU KEI WAN	20 DEGREES;
KOWLOON CITY	20 DEGREES;
HAPPY VALLEY	21 DEGREES;
WONG TAI SIN	21 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	19 DEGREES;
SHAM SHUI PO	20 DEGREES;
KAI TAK RUNWAY PARK	21 DEGREES;
YUEN LONG PARK	20 DEGREES;
TAI MEI TUK	19 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 07:02 HKT ON 26.11.2019

PRESS WEATHER NO. 060 - HOURLY READINGS
****

HOURLY READINGS

AT 8 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 21 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 74 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 0.1. THE INTENSITY OF UV RADIATION WAS LOW.

PLEASE BE REMINDED THA

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	21 DEGREES;
TA KWU LING	19 DEGREES;
LAU FAU SHAN	19 DEGREES;
TAI PO	20 DEGREES;
SHA TIN	20 DEGREES;
TUEN MUN	21 DEGREES;
TSEUNG KWAN O	20 DEGREES;
SAI KUNG	20 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	21 DEGREES;
TSING YI	21 DEGREES;
SHEK KONG	19 DEGREES;
TSUEN WAN HO KOON	20 DEGREES;
TSUEN WAN SHING MUN VALLEY	20 DEGREES;
HONG KONG PARK	21 DEGREES;
SHAU KEI WAN	20 DEGREES;
KOWLOON CITY	20 DEGREES;
HAPPY VALLEY	21 DEGREES;
WONG TAI SIN	21 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	19 DEGREES;
SHAM SHUI PO	21 DEGREES;
KAI TAK RUNWAY PARK	21 DEGREES;
YUEN LONG PARK	20 DEGREES;
TAI MEI TUK	20 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 08:02 HKT ON 26.11.2019

PRESS WEATHER NO. 066 - HOURLY READINGS
****
HOURLY READINGS

AT 9 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 21 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 73 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 0.5. THE INTENSITY OF UV RADIATION WAS LOW.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	21 DEGREES;
TA KWU LING	20 DEGREES;
LAU FAU SHAN	20 DEGREES;
TAI PO	20 DEGREES;
SHA TIN	21 DEGREES;
TUEN MUN	21 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	20 DEGREES;
CHEUNG CHAU	21 DEGREES;
CHEK LAP KOK	21 DEGREES;
TSING YI	21 DEGREES;
SHEK KONG	20 DEGREES;
TSUEN WAN HO KOON	20 DEGREES;
TSUEN WAN SHING MUN VALLEY	20 DEGREES;
HONG KONG PARK	21 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	21 DEGREES;
WONG TAI SIN	21 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	20 DEGREES;
SHAM SHUI PO	21 DEGREES;
KAI TAK RUNWAY PARK	21 DEGREES;
YUEN LONG PARK	20 DEGREES;
TAI MEI TUK	20 DEGREES.

BETWEEN MIDNIGHT AND 9 A.M. THE MINIMUM TEMPERATURE WAS 21.0 DEGREES CELSIUS AT THE HONG KONG OBSERVATORY.

PRESS WEATHER NO. 078 - HOURLY READINGS
****
HOURLY READINGS

AT 10 A.M. AT THE HONG KONG OBSERVATORY THE AIR TEMPERATURE WAS 21 DEGREES CELSIUS AND THE RELATIVE HUMIDITY 72 PER CENT.
DURING THE PAST HOUR THE MEAN UV INDEX RECORDED AT KING'S PARK WAS 1. THE INTENSITY OF UV RADIATION WAS LOW.

PLEASE BE REMINDED THAT:

THE STRONG MONSOON SIGNAL HAS BEEN ISSUED.

THE AIR TEMPERATURES AT OTHER PLACES WERE:

KING'S PARK	21 DEGREES;
WONG CHUK HANG	21 DEGREES;
TA KWU LING	21 DEGREES;
LAU FAU SHAN	22 DEGREES;
TAI PO	20 DEGREES;
SHA TIN	21 DEGREES;
TUEN MUN	22 DEGREES;
TSEUNG KWAN O	21 DEGREES;
SAI KUNG	20 DEGREES;
CHEUNG CHAU	23 DEGREES;
CHEK LAP KOK	22 DEGREES;
TSING YI	22 DEGREES;
SHEK KONG	21 DEGREES;
TSUEN WAN HO KOON	21 DEGREES;
TSUEN WAN SHING MUN VALLEY	21 DEGREES;
HONG KONG PARK	21 DEGREES;
SHAU KEI WAN	21 DEGREES;
KOWLOON CITY	21 DEGREES;
HAPPY VALLEY	22 DEGREES;
WONG TAI SIN	21 DEGREES;
STANLEY	21 DEGREES;
KWUN TONG	20 DEGREES;
SHAM SHUI PO	22 DEGREES;
KAI TAK RUNWAY PARK	21 DEGREES;
YUEN LONG PARK	21 DEGREES;
TAI MEI TUK	21 DEGREES.

DISPATCHED BY HONG KONG OBSERVATORY AT 10:02 HKT ON 26.11.2019